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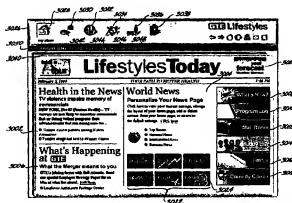
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(54) Title: BEHAVIOUR MODIFICATION SYSTEM WITH PERSONAL PORTAL





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journal for enabling the individual to enter personal health-related information into the system on a regular basis. In addition, the system includes an electronic meeting room for linking the individual to a plurality of other individuals having related behavior modification programs for facilitating group peer support sessions for compliance with the program. The system enables motivational media presentations to be made to the individuals in the electronic meeting room as part of the group support session to facilitate interactive group discussion about the presentations.

BEHAVIOUR MODIFICATION SYSTEM WITH PERSONAL PORTAL

FIELD OF THE INVENTION

The present invention relates generally to a computer-implemented system for promoting health, wellness, and achievement of goals through lifestyle change, and more particularly to a behavior modification system incorporating a personal portal.

BACKGROUND OF THE INVENTION

Every individual has fundamental set of core needs including, for example, health, security, and community. These needs can further be prioritized: More fundamental needs are preferably met first to insure survival. Once these needs have been satisfied, the individual can address and satisfy other core needs essential to his or her happiness and sense of fulfillment. In order to satisfy core needs, individuals must often make lifestyle changes. For example, individuals who are recovering from a surgical procedure such as a heart bypass, or are suffering from diabetes, must often make lasting lifestyle changes in order to satisfy the core need for health and wellness. Even people who do not suffer from particular ailments are known to benefit from healthy eating, exercise, and stress management. Individuals who are successful in making and adhering to positive lifestyle changes are likely to benefit from increased vitality, well-being, and self-confidence. Health and wellness can therefore provide the foundation for an individual to go on to satisfy other important but less fundamental needs, such as those involving career goals and other forms of self-expression.

At present, however, most programs for helping individuals make lifestyle changes involve doctors visits, self-help programs, seminars, or literary materials that provide information to the individual about the benefits of behavior modification and lifestyle change. These conventional methods are often ineffective in causing behavior modification because there is little or nothing in the way of an on-going support mechanism to assist the individual in making the recommended behavior modification, and little integration with the daily routines of an individual's life. The described methods are therefore insufficient for motivating the user to make the recommended changes, and further insufficient for monitoring compliance with such recommendations.

Participation in on-going support programs is often effective for users who have undergone surgery and must make subsequent lifestyle changes, but currently available in-person programs involve costly medical staff and facilities. It is also often inconvenient for those users to travel to such programs on a regular basis. Because of their cost and the potential for inconvenience, many support programs last only for a limited time that is generally insufficient for the user to modify behavior thoroughly and effectively.

1 Another disadvantage of existing lifestyle modification programs is the lack of
information readily available to the physician or other health advisor regarding the user's
compliance with the program. In order to monitor user compliance, the individual must make
5 frequent visits to the physician. In addition, the user might be required to track his or her
behavior and/or vital statistics on a regular basis and provide such information to the physician.
These tasks are often cumbersome to the user, causing him or her to avoid behavior modification
programs in their entirety.

10 Accordingly, there is a need for a behavior modification, compliance monitoring, and
feedback system that is able to effectively motivate individuals to participate in a behavior
modification program designed to assist individuals to satisfy their core needs. Such a desirable
system would be easily integrated into an individual's personal lifestyle and as conveniently as
possible encourage him or her to make use of the system as part of a daily routine. Computer-
based tools, such as customizable access to Internet sites and sources of information, can
15 accomplish this goal by catering to the individual interests of the user. A desirable system,
therefore seamlessly integrates with the individual's daily routine, and enables the user to
conveniently access tools and educational materials germane to the user's behavior modification
program.

20 In addition, the system should enable physicians, their staffs, or other health advisors to
receive frequent feedback on the individual's compliance with his or her program. With the
present push toward low cost yet high quality health care, a system by which health advisors
could readily access information on user compliance has clear benefits. It would also be
desirable to allow the system to provide access to aggregate reviews of compliance information
by health plan payors, such as HMOs, insurance companies, and large self-insured employers,
25 for the purpose of enhancing the efficiency of managed health care.

SUMMARY OF THE INVENTION

30 The present invention therefore provides for an integrated, computer-implemented,
electronically deliverable user behavior modification program, compliance monitoring, and
feedback system which provides: a behavior modification program having a series of milestones
for a user; accepts the input of data, such as health-related data, from these users at prescribed
times; correlates the data using a microprocessor with the milestones in the behavior
modification program to determine whether the user is complying with the program; groups
particular data using the microprocessor and linking the particular data to a remote computer; and
35 provides a personal portal integrated with the behavior modification program for encouraging
use of the system on a regular basis. A personal portal preferably infuses the Web portal site
concept with a new depth of personalization. The personal portal provides customizable access

1 to Internet, intranet sites or other sources of information which suit the individual interests of the
user, and provides access to those tools and educational materials germane to the user's
personalized and unique behavior modification program. It responds to individual priorities and
5 interests and helps create and support the lifestyle best suited to each user by promoting and
supporting the modification of health-related behaviors.

According to another embodiment of the invention, the personal portal automatically
provides access to Internet sites or other sources of information based on the individual
parameters of the user's program. According to a further embodiment, the personal portal
10 monitors the user's progress toward achievement of program milestones and displays articles and
resources for aiding achievement of the milestones. In this way, the system helps enhance user
compliance with his or her personalized and unique behavior modification program.

BRIEF DESCRIPTION OF THE DRAWINGS

15 These and other aspects of the present invention will become more apparent from the
following Detailed Description of a presently preferred embodiment of the present invention read
in conjunction with the accompanying drawings and exhibits, in which:

FIG. 1 is a block diagram illustrating how feedback and monitoring is used in the current
embodiment of the behavior modification program's compliance monitoring and feedback
20 system;

FIG. 2 is an exemplary screen for inputting an individual's personal information into the
system;

FIG. 3 is an exemplary screen for inputting an individual's medical information into the
system;

25 FIG. 4 is an exemplary screen for inputting an individual's medication information into
the system;

FIG. 5 is an exemplary screen for inputting an individual's behavior modification interests
into the system;

FIG. 6 is an exemplary screen for selecting vital statistics to be tracked by an individual
as part of his or her behavior modification program;

30 FIG. 7 is an exemplary screen for selecting exercises to be performed by an individual as
part of his or her behavior modification program;

FIG. 8 is an exemplary nutrition program suggested by the system, which may be
modified by a health advisor;

35 FIG. 9 is an exemplary screen depicting an individual's compliance with his or her
behavior modification program;

1 FIG. 10 is a graphical representation of a set of files for users for whom recovery programs may be designed or modified;

5 FIG. 11 is a graphical representation of an exemplary user file taken from among those represented in FIG. 11;

 FIG. 12 is a graphical representation corresponding to the Program Design option of FIG. 12;

 FIG. 13 is a graphical representation corresponding to the Program Detail option of FIG. 13;

10 FIG. 14 is an exemplary prescription form for inputting a user's baseline vital factors;

 FIG. 15 is an exemplary user progress report;

 FIGS. 16A-16G are flow diagrams of an exemplary process for accessing behavior modification tools and educational materials through a personal portal;

 FIG. 17 is an illustration of an exemplary home page provided by the personal portal in accordance with a preferred embodiment of the invention;

15 FIG. 18 is an illustration of an exemplary Overview page of an electronic journal accessible through the system;

 FIG. 19 is an illustration of an exemplary Program Log page of the electronic journal of FIG. 18 depicting a user's overall participation in his or her behavior modification program;

20 FIG. 20 is an illustration of an exemplary Program Log page of the electronic journal of FIG. 18 depicting individual elements for behavior modification;

 FIG. 21 is an illustration of an exemplary Scheduler page of the electronic journal of FIG. 18;

25 FIG. 22 is an exemplary screen displayed upon selection of a My Meeting option for allowing an individual to access video presentations through a Show Video option and join electronic meetings through a Join Meeting option;

 FIG. 23 is a graphical representation of an electronic meeting room upon selection of the Join Meeting option of FIG. 22;

30 FIG. 24 is a graphical representation of an electronic Coffee Shop for allowing individuals to chat and interact with one another;

 FIG. 25 is an exemplary screen for enrollment into the system's membership directory;

 FIG. 26 is an exemplary screen for displaying future electronic meeting topics;

 FIG. 27 is an exemplary screen for displaying future electronic meetings related to Cardiac topics;

35 FIG. 28 is an exemplary screen for submitting membership directory search criteria;

 FIG. 29 is an exemplary results screen for displaying a list of members matching the search criteria submitted via the screen of FIG. 28;

1 FIG. 30 is an exemplary screen showing food and diet related articles and informational materials;

 FIG. 31 is an exemplary electronic food diary for inputting and/or viewing food intake information;

5 FIG. 32 is an exemplary recipe finder for searching recipes based on a type of meal course;

 FIG. 33 is an exemplary recipe finder for searching recipes based on the various parameters;

10 FIG. 34 is an exemplary recipe finder for searching recipes based on an individual's dietary requirements;

 FIG. 35 is an exemplary recipe retrieved by the recipe finder of FIGS. 32-34;

 FIG. 36 is an exemplary introductory screen, incorporating video footage, upon selection of a Gym icon;

15 FIG. 37 is an exemplary screen showing an individual's exercise program;

 FIG. 38 is an exemplary screen of an animated demonstration of a selected exercise;

 FIG. 39 is an exemplary screen showing exercise-related articles and informational materials;

20 FIG. 40 is an exemplary screen of a Stress Management Park depicting session topics of an individual's stress management program;

 FIG. 41 is a sample self-assessment quiz given to an individual during a stress management session;

 FIG. 42 is an exemplary screen showing topics for progressive relaxation techniques;

 FIG. 43 is an exemplary screen of video and audio choices for relaxation;

25 FIG. 44 is an exemplary search engine for searching the system's archived articles and World Wide Web resources and references;

 FIG. 45 is a graphical representation of various interface tools, organized around a village motif, available to a clinical group user;

 FIG. 46 is a graphical representation of the system's Inner Core option;

30 FIG. 47 is a graphical representation of the system's Schedule Book option;

 FIG. 48 is an expanded graphical representation of the Schedule Book;

 FIG. 49 is a graphical representation of the system's Journal option;

 FIG. 50 is an expanded graphical representation of the Journal;

 FIG. 51 is a graphical representation of the system's Post-office option;

35 FIG. 52 is a graphical representation of the system's Note option;

 FIG. 53 is a graphical representation of the system's Postcard option;

 FIG. 54 is a graphical representation of the system's Telegram option;

1 FIG. 55 is a graphical representation of the system's Audio E-mail option;
 FIG. 56 is a graphical representation of the system's Kitchen option;
 FIG. 57 is an expanded graphical representation of the Kitchen option;
5 FIG. 58 is a graphical representation of the system's Recipes option;
 FIG. 59 is an expanded graphical representation of a Shopping List option;
 FIG. 60 is an expanded graphical representation of an educational topic available through
pull-down menu in FIG. 57;
 FIG. 61 is a graphical representation of the system's Gym option;
10 FIG. 62 is a graphical representation of a Stretching option of FIG. 61;
 FIG. 63 is a graphical representation of a Strength Training option of FIG. 62;
 FIG. 64 is a graphical representation of the system's Tranquility Park option;
 FIG. 65 is a graphical representation of the system's Relaxation option;
 FIG. 66 is a graphical representation of the system's Yoga option;
15 FIG. 67 is a graphical representation of the system's Library option;
 FIG. 68 is a graphical representation of the system's Articles option;
 FIG. 69 is a graphical representation of a World Wide Web access option;
 FIG. 70 is a graphical representation of an educational topic available through a pull down
menu in FIG. 67;
20 FIG. 71 is a graphical representation of the system's Travel Agency option;
 FIG. 72 is an alternative user interface screen provided by the system;
 FIG. 73 is a graphical representation of a log-on screen for a physician or case advisor in
accordance with another aspect of the present invention;
 FIG. 74 is a graphical representation of a main menu available to a physician or case
25 advisor;
 FIG. 75 is a graphical representation of an exemplary user file;
 FIG. 76 is a graphical representation of a blood pressure chart for an exemplary user;
 FIG. 77 is a graphical representation of a physical activity chart for an exemplary user;
 FIG. 78 is a graphical representation of a weight chart for an exemplary user;
30 FIG. 79 is a graphical representation of a cholesterol chart for an exemplary user;
 FIG. 80 is a graphical representation of the system's Behavior option;
 FIG. 81 is a graphical representation of the system's Recommend option;
 FIG. 82 is an expanded graphical representation of the system's Communicate option;
 FIG. 83 is a graphical representation of the system's Video Conferencing option;
35 FIG. 84 is an exemplary screen for specifying system access for an administrator or health
advisor;
 FIG. 85 is an exemplary screen for modifying nutrition program levels;

1 FIG. 86 is an exemplary screen for modifying or adding exercises or exercise program levels;

5 FIG. 87 is a graphical representation of a main menu available to a health plan payor or employer;

FIG. 88 is a graphical representation of a View Compliance Status option;

FIG. 89 is a graphical representation of a View Comparative Costs option;

FIG. 90 is a graphical representation through which the system indicates whether the user has executed a limited waiver of confidentiality;

10 FIG. 91 is another graphical representation of an exemplary user record;

FIG. 92 is a graphical representation of the system's Review Costs option;

FIG. 93 is a graphical representation of the system's Review Outcomes option;

FIG. 94 is a graphical representation of the system's Perform Utilization Review option;

15 FIG. 95 is a graphical representation upon selection of an exemplary physician group of FIG. 93; FIG. 96 is an expanded graphical representation of a Communicate option of FIG. 87;

FIG. 97 is a block diagram of the behavior modification program's compliance monitoring and feedback system;

FIG. 98 is a flow diagram illustrating certain aspects of the behavior modification program's compliance monitoring and feedback system; and

20 FIG. 99 is a flow diagram illustrating aspects of a software module for personalizing an individual's behavior modification program.

To facilitate description of the present invention, reference is made in numerous instances to the flow diagrams of FIG. 98, and in FIG. 99. For convenience, the blocks in the flow diagrams are numbered beginning at 1000.

25 DETAILED DESCRIPTION OF THE INVENTION

Referring to FIG. 1, in a presently preferred embodiment of the invention, the user 10, physician 12, case advisor 14, and health plan payor 16 (such as an HMO, insurance company or self-insured employer), all provide input to and/or receive output from the behavior modification, compliance monitoring, and feedback system. The system offers a personalized behavior modification program customized to fit the health care and recovery needs of individual users. The case advisor may be a nurse, psychologist, psychological therapist, nutritionist, physical trainer, physical therapist, or any other person trained in the health sciences area. Users electronically interact with the system and their case advisors through a system interface 18.

35 The behavior modification, compliance monitoring, and feedback system provides at least three separate benefits. First, it is based upon and facilitates prioritization of core needs of an individual, such as health, security, and community, and facilitates the integration of these basic

1 needs with overall lifestyle at home and work, through a personal portal. The personal portal
infuses the Web portal site concept with a new depth of personalization. It encourages use of the
system for behavior modification necessary to satisfy the core needs, by conveniently providing,
5 in a centralized location, access to behavior modification tools and educational materials, as well
as customizable access to Internet sites and other sources of information which suit the individual
interests of the user. The user is, therefore, likely to be naturally drawn to the system as part of
his or her everyday activities. The textual and graphical prompts further motivate usage of the
tools and educational materials.

10 Second, the system helps the individual comply with the program through an
electronically-implemented support mechanism. The system provides an exemplary support
mechanism in the form of electronic group meetings, bulletin boards, and other programs that
enable the individual to interact with other users participating in similar behavior modification
programs.

15 Third, the system assists case advisors in monitoring compliance with the behavior
modification program. Through this monitoring, a case advisor may not only encourage an
individual to comply with his/her program, but may also change the program according to the
individual's progress.

20 A wide range of individuals can benefit from the system. By way of example only, these
individuals include those with chronic ailments such as coronary artery disease, diabetes, chronic
pain, depression, addiction, arthritis, cancer and asthma, as well as users who are recovering from
medical procedures such as angioplasty or by-pass surgery (the "clinical group").

25 The system may also assist individuals who simply want to maintain their health and
prevent or reduce the risk of ailments (the "wellness group"). For individuals in the wellness
group, the program may focus, for example, on stress management, diet, and exercise. The
wellness group may further include family members of the clinical group who may need group
support and/or counseling to deal with the family member's chronic illness. The members in the
wellness group may not need all the features available to members in the clinical group.
Furthermore, access to certain areas within the system may be customized and /or limited to meet
30 the individual user's needs.

The system is not limited to health and wellness. The powerful techniques the system
employs can be tailored to virtually any area of lifestyle change, including, for example, job
performance enhancement, management or training that can benefit from a controlled behavior
modification. For instance, the system can be a highly cost-effective Human Resources solution
35 for large employers to facilitate employee preventive health care and disease management,
increasing workforce productivity while decreasing medical costs. The system can also be a

1 medium for employer messaging and workforce communications with powerful applications in
wide-ranging areas such as sales force management.

5 Managed care organizations are another market in which the system may be utilized. The
system can greatly facilitate the marketing efforts of these organizations to employers, as well
as offer easy implementation of a wide variety of preventive care and disease management
programs among an HMO's subscriber base. Other applications of the system include, without
10 limitation, modification of the behavior of sales and marketing personnel to enhance
productivity, corporate employees and workers to enhance efficiency, workplace training,
elementary school training of children, or any other application where behavior modification is
beneficial. The system, therefore, may be configured into a myriad of individualized applications,
depending on an individual's personal needs and priorities. For instance, if the system is used for
15 modification of the behavior of sales and marketing personnel for personal effectiveness training
with the goal of increasing sales, the system might request information from the employee as to
the number of existing sales contacts, and details of situations in which sales were not effective.
The system might then correlate the information and recommend a goal-oriented program that
will allow the employee to enhance his or her sales tactics, or increase the number of sales
20 contacts. The tools and educational materials provided by the system helps the employee
modify his or her behavior to allow the user to reach the desired goal. For instance, the employee
might be provided with tips on how to handle difficult customers, gain self-assurance, etc.. On-
line group meetings might also be scheduled to provide moral support and counseling on how
to be a more effective salesperson. The system is preferably integrated with a program for health
and wellness for helping the individual satisfy the core need of health and wellness, which will
25 provide the foundation for the individual to prosper in their career and other aspects of their life.
The combination of education and tools that assist the individual in applying that education and
integrating it into daily life, along with other elements such as feedback and other forms of
support, result in a behavior change.

The system may also be integrated with additional commercially available software which
30 complements and/or adds features to the system to further aid fulfillment of an individual's core
needs. Thus, by way of example, an enterprise customer might integrate its sales and marketing
automation software into the system. The system's personal portal would thereby become a
vehicle for the speed management of a company's sales force, disseminating vital information
whose rapid deployment is essential to shortening its sales cycle. Sales representatives would
35 use the system as a means of communicating with both the home office and each other. The
system would also provide a forum for motivational problem-solving, and assist sales reps in
maintaining a healthy lifestyle on the road, while also keeping up-to-date with tactical and
strategic developments.

1 As another example from the health-care arena, Pharmaceutical Benefits Management (PBM) firms could integrate their Internet-enabled member transaction and prescription care software into the system. The system's unique programming services and user-friendly interface
5 would greatly increase the effectiveness, usability, and member satisfaction of their digital initiatives.

The behavior modification system including the personal portal preferably includes software tools, including artificial intelligence (AI), expert systems, smart agents, and search engines.. An artificial intelligence (AI) system allows representation of a task, has problem-solving methods for manipulating the task, an operating framework for facilitating the processing
10 of the task, and knowledge necessary for solving the task.

An expert system is a particular type of an AI system that focuses on the knowledge factor. Expertise consists of knowledge about a particular domain, understanding of domain problems, and skill at solving some of those problems. The knowledge may be either public or private. Public knowledge includes the published definitions, facts, and theories which are
15 contained in the textbooks and references in the domain of study. Private knowledge includes rules of thumb and heuristics for allowing educated guesses to a given problem.

The personalization feature allows the system to work internally by maintaining user profiles, tracking usage of the system, providing feedback to the users as to their individual progresses. The smart agent feature obtains information on the Internet via conventional search
20 engines, in response to a user request.

In a presently preferred embodiment, a user desiring to enroll on the system to make a desirable or necessary behavior modification contacts a case advisor via e-mail, telephone, or other known communication methods. The case advisor then gathers information on the user to
25 create the user's personalized behavior modification program. In doing so, the case advisor electronically provides the user with one or more forms to complete. Such forms might include personal profile forms, medical forms, and/or surveys to determine the user's motivation in making a behavior modification. Alternatively, the user provides the profile information to his or her employer, HMO, or another person or entity who then enters the information directly into
30 the system, or provides the information to the case advisor who enters it into the system.

The case advisor sets up the new user based on information contained in the completed forms. This process includes input of the individual's personal contact information, including his or her user ID and password, by selecting a Personal option 2000 as shown in FIG. 2. Selection of a Medical option 2002 allows addition of the individual's medical information. FIG.
35 3 is an exemplary screen illustrating the types of medical information that can be filled-in for an individual. This might include, for instance, information as to the individual's height, weight,

1 heart rate, blood type, cholesterol level, and the like. The desired goals, such as a goal weight
2004, may also be input if relevant.

5 The system allows entry of information as to the individual's medications by selecting a
Medication option 2006. FIG. 4 illustrates a screen image with an exemplary individual's
medication information filled out. This information may be updated by selecting an Update
Medication button 2008. Furthermore, through the Reminder Service option 2010, the system
reminds the user via his or her pager when it is time to take the medication. Reminders may also
be sent via e-mail or phone if desired.

10 To place the individual in an appropriate behavior modification program, it is desirable
to get information as to the individual's interests in making a lifestyle change. The case advisor
thus interviews the individual to survey the goals that the individual wants to achieve. During
the interview, the advisor may propose that some of the goals indicated by the individual are too
ambitious, or not ambitious enough.

15 After the interview, the case advisor inputs the goal information into the system by
selecting a Goal option 2012. FIG. 5 displays an exemplary set of behavior modification goals
2014. The case advisor rates a user as being very interested, moderately interested, somewhat
interested, not very interested, or not at all interested (referred generally at 2016), in meeting
specified goals. As the user participates in the program, the case advisor reflects changes in the
user's interests in meeting the goals, by entering such changes via an Update button 2018.

20 Once the case advisor enters information on the user's personal profile, medical history,
behavior modification interests, and the like, into the system, either the system or case advisor
recommends a behavior modification program with a default set of goals based on the user's
needs and existing medical protocols (block 1010, FIG. 98). The default set of goals may be
modified by the case advisor, or even by a physician or another health advisor if necessary (block
25 1012, FIG. 98).

To monitor an individual's progress in meeting the specified goals, the system may further
require the individual to keep track of his or her vital statistics in an electronic journal. For
instance, if the user is on a weight loss program, the vital statistics to be tracked might include
his or her weight, waist size, hip size, and the like. FIG. 6 illustrates exemplary vital statistics
30 information 2019 that the system may ask the user to track. The frequency of the tracking 2020
might vary based on the particular vital statistics. For instance, the user's weight may be tracked
once a week while his or her waist size may be tracked every month. A Submit button 2021
allows the entry of completed vital statistics information to the system as often as the case
advisor desires. The submitted information is then available to the system for correlating with
35 the milestones in the behavior modification program and determining whether the user is

1 complying with the program. In addition, the case advisor or another health advisor may modify the program as necessary upon review of the submitted data.

Referring now to FIGS. 7 and 8, the case advisor may also select an exercise program, a nutrition program, a stress management program, and a support group meeting program to help users achieve their behavior modification goals. FIG. 7 is an illustration of a screen allowing formulation of an exercise program for an individual. An Exercise 2022 option permits the case advisor to determine the types of exercises the user should perform and the repetitions for each exercise, to achieve the program goals. The types of exercises recommended as well as the number of repetitions for each exercise depends on the information provided by the user for being enrolled in the system. Thus, different exercise programs might be recommended for users with different weights, different physical conditions, and different health histories. For instance an exercise program recommended for a user with back problems might differ from an exercise program of a user who does not have such an ailment.

The case advisor may also select a nutrition program using the system's Nutrition 2024 option. FIG. 8 illustrates an exemplary nutrition program detailing the amount of calories, fat, cholesterol, sodium, fiber, etc. that the user should consume to achieve his or her goals 2026. The system preferably selects the nutritional program that is personalized for a particular user upon correlation of information pertaining to the user such as age, sex, weight, health information, medication information, and the like. For instance, if the user is recovering from a recent heart attack, the nutritional program selected might allow for only a low amount of cholesterol in the user's diet. A Modify 2028 button allows the case advisor to change the nutrition program based on the individual's progress with his or her program.

As the user participates in the behavior modification program, the system may make the individual's overall progress data electronically available to the case advisor to help the manager monitor the individual's progress in the program. Based on the progress data, the case advisor might decide to modify the behavior modification program, send encouragement letters to the individual, or contact the individual to determine the reason for a lack of compliance. According to a preferred embodiment, the case advisor selects the Overall Progress 2030 option illustrated in FIG. 9 to view an individual's overall progress. The system depicts the individual's daily progress data in a graphical form 2032 along with a chart 2034 specifying all the program areas 2033 in which the user might be participating. For a given date, the chart specifies whether the user has complied with a specified program area, has not complied with the program area, or that the program area is not applicable to the user. As discussed in further detail below, the system also makes the overall progress information available to the user through an electronic journal.

1 The system can also graphically display individual elements of a user's progress. For
instance, selection of a Medication Log 2036 option causes the display of the user's daily
compliance with medication intakes along with a chart specifying the exact medications that the
5 individual has or has not taken. This information is also available to the user through his or her
electronic journal.

FIGS. 10-13 illustrate an alternative user interface for case advisors to enroll an individual
into the system. Referring to FIG. 10, the case advisor sets up a new patient based on
information contained in the patient prescription form or accesses the records of existing patients
10 through patient files 40. In this example, the patient files 40 are identified by the patient's name
and social security number. To create or modify the program for a particular patient, the manager
creates a new folder or selects a preexisting folder 42 corresponding to the patient in question.

FIG. 11 illustrates an exemplary patient record after the case advisor selects the desired
user file 42 in FIG. 10. The record includes, among other things, the user's current status and
program goals. The first column 44 of the record sets forth fields for pertinent user information
15 including the user's vital statistics (e.g., weight, cholesterol level, blood pressure), other baseline
characteristics (e.g., patient's smoking habit, physical activity, alcohol and eating habits,
depression and stress levels, seat belt use), and information relating to the user's medications, if
any. The second column 46 of the record sets forth the baseline values corresponding to the vital
20 signs and user characteristics at the beginning of his or her participation in the program. As
shown in the third column 48, the system has the ability to accept updated information taken
from the user on-line and from subsequent office visits. Based on the patient's initial evaluation
and/or short-term progress, the case advisor can design a new program or modify an existing
program for the user by selecting the system's Design option 50.

Referring to FIG. 12, upon selection of the Design option 50 in FIG. 11, the system
25 prompts the case advisor to assign intensity levels 51 corresponding to the user's diet, exercise,
stress management, need for group support, anticipated compliance, and pharmaceutical
requirements. The intensity levels in this example range from a lowest level of 1 to a highest
level of 5. The system may also include other measures of program intensity.

30 Based on the input information, the case advisor or the system itself generates a set of
goals 52 or milestones for the patient. The system does this by correlating the patient's age, sex,
weight and information relating to the health, life situation and diagnostic category of the patient
to established medical protocols for that type of patient. The system may also take into account
35 other pertinent information including the patient's medication and other health conditions. Based
on the correlation, the system suggests a program including goals relating to intake of calories
from fat, exercise level, stress management counseling, and group support and compliance

1 management frequency. The case advisor may view details regarding the implementation of the goals by selecting the system's Program Detail option 54.

5 Referring to FIG. 13, upon selection of the Program Detail option 54, the system presents the user record 60 along with the recommended one month goals 61 and final goals 62. The case advisor may confirm 63 or edit 64 the suggested program to modify the goals by making appropriate selections (block 1012, FIG. 98).

10 The content of the user records and the generated goals vary depending on the user's diagnostic category. For example, some of the information shown on the user record may not be necessary for an individual belonging to the wellness group. Information regarding calories, cholesterol level, blood pressure, and seat belt use, for instance, may not pertain to a person who is on the system to get support to help deal with a family member who suffers from a chronic ailment.

15 In an alternative embodiment, a user may enroll into the system directly without aid of a case advisor. According to this embodiment, the user preferably accesses the system via the Internet. The user then completes necessary forms on-line to provide the system with information as to the user's profile, medical history, desired goals, and the like. If the system is configured as an AI or an expert system, the program recommendations, modifications, trackings, etc. are all automated. In this case, the system correlates the input information, such as the patient's age, sex, weight, medical information, and goals, to established medical protocols for that type of individual. The system then suggests a default behavior modification program for the user and modifies the program based on user progress. On the other hand, if a case advisor works in conjunction with the AI or expert system, the initial recommendation of a behavior modification program is made by the system, but any updates or modifications to the program are done by the case advisor, as described above in further detail.

25 In yet another embodiment, a physician or other health professional diagnoses an individual with an ailment. The physician may then recommend a health care maintenance or recovery program which requires the patient to, for example, take certain medications, participate in a support group or control risk factors by altering diet, following an exercise program, and/or managing stress levels.

30 The physician then places the user on the system to help him or her make these desirable or necessary lifestyle and behavior modifications. In order to subscribe the user to the system, the physician or another health professional first enters the user's baseline vital factors into the system by any suitable means. Such factors may include blood pressure readings, heart rate, height, weight, cholesterol levels, and the like. Depending on whether the doctor is on-line (block 1000, FIG. 98), the doctor may input these vital factors into the system directly via his or her personal computer (block 1002, FIG. 98). Alternatively, the physician may fill out a

1 prescription form and send the information to the case advisor, who then sets the user up on the system (blocks 1004, 1006 and 1008, FIG. 98).

5 Referring to FIG. 14, an exemplary prescription form 22 contains basic profile information 23 such as the user name and user ID. In using the form, the physician might select a diagnostic category 24 and prescribe a recovery program level 26. In the exemplary embodiment, eight separate diagnostic categories are used to describe the state of the user's health. Category I, for example, includes users who have suffered from a heart attack within the current year, while Category VIII includes users who suffer from no particular ailment but are on the plan simply to promote wellness. The system may include other categories as necessary.

10 Depending on the diagnosis, the physician may recommend that the user cease smoking or that he or she lose a targeted amount of weight within a certain period of time, by circling the appropriate response in field 30. The physician may also enter other information, such as the user's medications 32 into the form. The physician then circles or fills-in desired 3-month targets 34 relating to, among other things, daily calorie intake, percent daily intake of saturated fat, maximum heart rate, and cholesterol level.

15 Referring to FIG. 15, the system also sends an exemplary patient status report 70 to physicians who do not have direct access to the system. The status report may include information regarding a patient's current status 66, suggested next steps 67, and target goals 68. The system may include other information in the status report as desired by the physician. The physician has the option to agree with the suggested next steps 69 or indicate changes to the program. The physician then sends the report 70 back to the case advisor for modification of the program as necessary. Communication may take place via e-mail, facsimile, or any other method of transferring data.

20 Once an individual is set up on the system, it assists the individual in complying with his or her behavior modification program (block 1020, FIG. 98). In a currently preferred embodiment, a personal portal is used for personalization as well as a smart agent, allowing the user to access behavior modification tools, educational materials, and other resources on the Internet. The personal portal serves as a digital on-ramp to the World Wide Web, which is personalized to meet the individual's health and lifestyle needs. The personal portal provides users with the tools to make desired or necessary behavior modifications, and integrates such modifications into the user's everyday life.

25 FIGS. 16A-16G are flow diagrams illustrating the operation of various tools and educational materials provided by the personal portal. The main routine illustrated in FIG. 16A begins with the user logging onto the system 4000 via a telephone line, cable modem, cellular connection, satellite link, or other known communication methods allowing connection with a network server. The user logs onto the system through input of a valid user ID and password.

1 After the user has logged onto the system, the main routine displays a home page on a
display monitor in step 4002. FIG. 17 illustrates a home page according to a preferred
embodiment. As shown here, the personal portal allows the home page to be organized as a
5 cover page of a newspaper providing access to Internet sites, intranet sites or other sources of
information which suit the individual interests of the user. The system then updates the
information provided on a daily basis as is done with a conventional newspaper. A person
skilled in the art should realize, however, that the updates might occur several times a day, or on
a weekly or monthly basis.

10 The personal portal also provides the home page with links 3022 to other sites of interest
via icons, buttons, menu items or other types of select mechanisms. The category of sites
identified by the Internet links 3022 are customizable based on the user's interests. In the
illustrated example, the Internet links 3022 pertain to shopping, stocks, education, sports, travel,
and horoscope.

15 Besides being customizable based on user interests, the personal portal, according to an
alternate embodiment of the present invention, provides personalized information and feedback
to the user based on the information available on the user. A link to a computer database storing
user-specific data such as the user's name, address, birthday, medical information, program
elements, program goals, and the like, allows the system to know intimate details about the user
20 to provide the necessary tools and resources for aiding compliance with the individual's behavior
modification program. A difference between customization and personalization may be better
understood by considering the following example. A user customizes the home page by creating
a news page with the types of news that he or she is interested in, such as Health News 3002,
World News 3004, and Business News 3006. The personal portal may then perform
25 personalization as well as smart agent functions, in regards to the articles provided in the Health
News 3002 category. In a preferred embodiment, the system analyzes the particular behavior
modification program prescribed to the user, and displays articles, advertisements, e-commerce
opportunities, and links to Web sites pertinent to the user's personalized program. For instance,
if the user is in a smoking cessation program, the personal portal provides articles in the Health
30 News 3002 section pertaining to the topic.

In yet another aspect of personalization, the system monitors the user's progress in his
or her behavior modification program, and regularly reconfigures the articles, tools and resources
provided to the user based on such progress. These resources might be stored in the system's
local database. In addition, the system might invoke a search engine to find the relevant
35 resources on the Internet outside the local database. If the system determines that the user is not
meeting the established goals, the personal portal provides articles, advertisements, e-commerce
and Web site links on the home page that provide additional aids to the user to meet those goals.

1 For instance, if the system determines that the user in a smoking cessation program is smoking
three cigarettes a day when, the user should be smoking only one, the personal portal provides
advertisements of products which may aid the user to stop smoking, as well as Web site links
5 with information relevant to smoking cessation. The articles and Web site links may be geared,
for instance, to tips on how to overcome the urges to smoke. The advertisements may be geared
towards nicotine patches or an innovative medication to help kick the smoking habit. The
opportunity to purchase such items via e-commerce might also be offered. Such feedback from
the personal portal helps reinforce positive behavior and discourage negative behavior. In
10 addition, the system might schedule the individual on additional group meetings and mentoring
sessions to receive more support and guidance to help the individual comply with the program.
Other relaxation and meditation tools might also be provided help the user fight the urges of
smoking.

As another example of how the portal can be personalized, the Horoscope 3024 and
15 Weather 3020 options respectively provide horoscope information based on the user's birth date
and weather information based on the user's address. A What's New? section 3008 alerts the
user of any additions to the system contents, such as addition of new recipes, new articles, and
the like, based on the user's particular behavior modification program. For instance, a user
recovering from a recent heart attack might be informed through the What's New? section of a
20 new Web site containing information relevant to new discoveries in this area. This information,
however, might not be displayed to an individual who is using the system solely to try to stop
smoking because it would be irrelevant to such individual.

A Comedy Corner 3018 provides comedy video clips or radio show clips for adding
humor to the system and further enticing the individual to use the system on a regular basis.

25 The personal portal is further integrated with a behavior modification program and
provides access to tools and educational materials germane to the program through a main
control bar 3026 on the home page. The integration of the personal portal with an individual's
behavior modification program helps promote usage of the system on a regular basis. For
instance, a user who enjoys to read the day's news, check the weather, and further read the
30 horoscope on a daily basis, might now do so through the personal portal rather than through a
conventional newspaper. As the user accesses the personal portal to perform his or her daily
routine, the user can further access behavior modification tools and educational materials
integrated into the personal portal, making usage of those tools and educational materials also
part of the user's everyday routine. The entertainment aspects of the personal portal, such as the
35 Comedy Corner 3018 and Horoscope 3024 sections, as well as the textual and graphical prompts,
provided through the home page, further draw the user to the personal portal and promote its

1 usage on a regular basis. Such regularity and consistency is an essential factor in the modification of previously existing behaviors and the adoption of new ones.

5 The present system may further be integrated with other commercially available software programs, allowing the system to further prioritize and meet the core needs of individuals. For instance, sales and marketing automation tools might be incorporated into the system of a user in the marketing and sales area. The integrated system will not only provide the user with behavior modification tools and resources affecting his health and/or effectiveness as a salesperson, but the sales automation tools integrated into the system might allow the user to utilize the system to record and disseminate customer needs to other company personnel.

10 The system preferably includes a personalization module integrated with the behavior modification program. In a presently preferred embodiment of the present invention, the system accesses 1200 (FIG. 99) user information from various sources within the program. These sources include, for example, the user profile, program goals, the user preferences, the user meeting rooms, the user's self-reporting tools, such as the journal, or any other sources of user information. From this information, the system next correlates 1210 (FIG. 99) the gathered information to a database and/or conducts a search for articles, recipes, group support programs, advertisements, e-commerce sites and opportunities, and any other information that is relevant to the user. The search may be conducted within public or proprietary databases via an Intranet, the Internet, or local storage. Additionally, any one of a number of conventional search engines or other public, proprietary, or third party sources may retrieve information. The system then delivers 1220 (FIG. 99) the information to the user by one or more methods to assist and motivate the user to achieve his or her goals. For example, the system may present the articles on the Lifestyle's home page, recommend recipes, present the gathered articles, suggest changes to the program, or promote certain products or group support programs based on the gathered information. With such a personalization module, the system provides a powerful tool for behavior modification.

25 In a currently preferred embodiment, the main control bar 3026 is organized around a village motif providing graphical representations of the user's home ("My Place") 3028, Community 3030, Kitchen 3032, Gymnasium 3034, Park 3036, and Library 3038. The personal portal continuously monitors for user selection of an item on the main control bar 3026. If the personal portal detects such a selection, it proceeds to perform functions related to the selected item, including the display of a subcontrol bar 3050 with options pertaining to the selected icon. Similarly, the personal portal continuously monitors for user selection of an item on the subcontrol bar 3050, and performs functions related to the selected item upon such selection. In a preferred embodiment, the user accesses the home page by selecting the My Place icon 3026 in the main control along with a Home Page option 3040 on the subcontrol bar 3050. Referring

1 now to the main routine of FIG. 16A, if the user is to access the Internet, as inquired in step 4004,
by selecting, for instance, an on-line news article on the news page 3002, 3004, 3006, or a
5 customized link 3022 to an Internet site of interest, the system performs traditional Internet-
related functions 4006, such as accessing the on-line articles and displaying them to the user.

If, however, the user has selected the My Place 3028 icon from the main control bar 3026
as inquired in step 4008, the subcontrol bar 3050 displays a Home Page option 3040, Journal
option 3042, My Meeting option 3044, Favorites option 3046, and My Profile option 3048. The
process also invokes the exemplary subroutine illustrated in FIG. 16B. If the subroutine
10 determines in step 4010 that the user has selected the Home Page option 3040, the subroutine
returns to the process of FIG. 16A for displaying the home page.

If, however, the subroutine determines in step 4012 that the user has selected the Journal
option 3042 (FIG. 17), the subroutine proceeds to perform electronic journal functions in step
4014. FIGS. 18-21 are illustrations of an exemplary electronic journal for performing such
15 electronic journal functions. In a preferred embodiment, the journal includes an Overview page
2114, a Program Log page 2116, and a Scheduler page 2118. FIG. 18 depicts an Overview page
2114 listing specific areas of an individual's behavior modification program. For instance, the
Overview page illustrated displays the medicines prescribed to the user 2120 as well as the
frequency of their intake, on overview of the user's nutritional program 2122, and the types of
20 exercises the user must perform 2124. In addition, the Overview page 2114 includes a display
of the user's personal schedule 2126 and a to-do list 2128 for the day as entered through the
Scheduler page 2118 described in further detail below.

FIG. 19 illustrates an exemplary Program Log page 2116 provided by the electronic
journal. The user may create a shortcut 3010 (FIG. 17) to this page from the home page for faster
25 access to his or her program log. The Program Log page 2116 is a daily reminder of the
medications the user must take as well as exercises and tasks 2130 that the user must do to
comply with his or her behavior modification program. According to one embodiment, the
system searches a Program Database for the user's particular behavior modification program.
If the user takes medication, the Program Log page 2116 inquires whether the user has taken the
30 medication for the current day. Similarly, if the user needs to comply, on a given day, with an
exercise program, nutrition program, or stress management program, or if the user must measure
his or her blood pressure on that day, the system inquires whether those tasks have been
completed. As the individual performs the tasks assigned, he or she fills out a checklist 2138 and
electronically submits it to the health advisor through a Submit option 2132. In this way, the
35 health advisor can monitor the individual's compliance with the behavior modification program
on a daily basis without the individual having to make frequent doctor visits.

1 The Program Log page 2116 also allows users to view their overall progress 2134 in their
respective behavior modification programs. In the example portrayed in FIG. 19, the system
depicts the user's overall progress in the form of a graph which displays the user's daily, weekly,
5 or monthly progress. Each graph bar 2136 preferably illustrates the percentage of tasks,
mandated by the user's behavior modification program, that the user has completed for a selected
time period. The system alerts the user of lack of compliance with his or her program for a given
time period through a change in the color of the corresponding graph bar. For instance, if the
user has completed only 50% of his tasks on February 2, the system may set the bar color
10 corresponding to that date to yellow. If, however, the user has complied with only 25% of his
tasks, the system may change the color bar to red to visually alert the user that he or she had
fallen below an acceptable compliance level on that date. In addition, the system might provide
additional tools, educational materials, advertisements, e-commerce opportunities, and Web site
links through the personal portal 3000 (FIG. 17), to help the user comply with his or her program
15 if a lack of compliance is detected.

The Program Log page 2116 also enables the user to view his progress on an item-by-
item basis. FIG. 20 illustrates the type of items the system offers to the user for individual
viewing. For instance, the user might view his or her weight progress by selecting a weight item
2138 on a pull-down menu from the overall progress 2134 box. The overall progress viewing,
20 as well as the item-by-item viewing options, provides feedback to the user as to his or her level
of compliance with the behavior modification program. Such constant feedback helps motivate
the user to participate in the program on a regular basis. It makes it far less likely that the user
will be able to become non-compliant through inattention or laziness.

The Program Log page 2116 further allows the user to view the reward points 2140 that
he or she has accumulated to date. A user may earn points by good participation in the program
and/or by reaching certain milestones. For instance, the system may award points for good
attendance at electronic meetings, consistent completion of the program log, and/or meeting
25 certain predetermined goals. The rewards may range from symbolic, such as getting "gold stars"
that commend a user for his or her progress, to reward points and frequent flier miles which the
user may exchange for goods. The rewards points feature of the system, therefore, further
30 motivates the user to regularly participate in the behavior modification program.

The electronic journal also provides a Scheduler page 2118 as illustrated in FIG. 21. The
Scheduler page 2118 allows the user to set up daily appointments and a to-do list. A menu 2120
displayed upon selection of a push-down button 2122 on the Scheduler page 2118 permits the
user to view his daily schedule, view his to-do list, or print out either or both of those items. The
35 daily appointments and to-do items input through the Scheduler page 2118 appears on the user's
Overview page 2114 for the corresponding day as illustrated in FIG. 20.

1 Referring back to FIG. 16B, if the subroutine determines in step 4016 that the user has
selected the My Meeting option 3044 (FIG. 17), electronic meeting functions are performed in
step 4018. Accordingly, a Join Meeting icon 2026 illustrated in FIG. 22 allows the user to
5 participate in a scheduled electronic meeting which the user has signed-up for. The system
facilitates this process through the use of electronic and on-line technologies. On-line group
counseling solves many of the logistical difficulties encountered in bringing together, on a
regular basis, a large group of people with different schedules who live in different places.
Instead of requiring users to physically travel to a meeting location, the system enables them to
10 attend group meetings by simply logging on to their computers. As the burden on the individual
user decreases, group attendance increases, and this enhances the overall practical, value of
group counseling and support.

On-line counseling also brings an individual into contact with a wider pool of people with
similar problems than is afforded through traditional counseling. When desirable or necessary,
15 group membership can be drawn from people in a wide variety of regions instead of being
limited to a single vicinity. Furthermore, the relative anonymity of electronic communication
benefits users who are reserved or possibly embarrassed by their situations. These users may be
more willing to share their feelings in an on-line environment than they would be face-to-face.

FIG. 23 illustrates an electronic meeting room 96A interface for participating in group
20 meetings through which a user receives on-going, on-line group support. Users have access to
the meeting room 96A interface via the join meeting icon 2026 of FIG. 22. Upon selection of
the icon 2026, users are presented with meeting rules and regulations. They may then proceed
to a pre-scheduled meeting. Only those scheduled for a meeting will be permitted to attend. The
scheduling of meetings is part of the Community 3030 (FIG. 17) interface discussed in greater
25 detail below.

Referring to FIG. 23, each participant 112 may chose to represent him or herself in one
of two different ways in the electronic meeting room. The system can scan a participant's 112
photograph to represent him or her in the system. Alternatively, if the user desires anonymity,
he or she may choose to be represented by a non-photographic icon, or "avatar," accompanied
30 by either his or her actual name or a pseudonymous screen name. The avatar then represents the
user in group meetings and private mentoring sessions. In some cases, users may choose to
design and construct their own avatars.

1 A trained, experienced leader or chairperson 114 conducts the group counseling sessions. The chairperson preferably guides the discussion and encourages participation from all members. To enhance the beneficial aspects of group counseling, the system allows the chairperson 114 to
5 access selectively certain parts of the user's electronic journals and electronically display the selected portion in an anonymous manner to the on-line group. The chairperson 114 can also cut somebody off electronically if he or she is saying things that are inappropriate during a meeting.

In a preferred embodiment, a participant 112 "speaks" at a meeting by entering text at 122. Upon hitting the enter key, this text appears as "bubble-talk" 116 above the representation
10 of the participant 112 who entered the corresponding text. A participant may express emotions on the screen by selecting and inserting one of the graphically represented facial expressions at space 122 provided for text input. In an alternative embodiment, instead of using a "bubble-talk" format, each participant 112 may participate at the meetings by talking into a microphone connected to his or her PC, and listening to other participants via speakers also connected to the
15 PC. Indeed, group meetings can be conducted in any number of configurations: text only, voice to text, or streaming audio/telephony.

A log window 110 keeps a running or scrolling record of the conversations during an electronic meeting. Thus, if a participant 112 loses track of the conversation, or wants to comment on something said earlier, he or she has access to the entire conversation for reference.

20 During group counseling meetings, a chairperson 114 may play on-line multimedia presentations featuring other users or well-known figures who have made positive lifestyle changes. In the presently preferred embodiment, each participant has access to the multimedia presentation, such as a video clip, via CD-ROM received by mail on a regularly updated basis. Alternatively, if the user has access to the appropriate software and hardware, and has a
25 connection of sufficient bandwidth to the server, the system may stream the multimedia presentation to him or her over the network. In addition to CD-ROM, the system can also use DVD disk, downloads to the user's computer hard drive, or any other method or medium capable of storing or transmitting audio and video data. Each video clip also has associated with it a text profile summary 2028 of the speaker featured in the video.

When it is time to view the multimedia presentation, the chairperson selects a show video icon 2024 (FIG. 22) which sends
30 a signal via the network to each participant's PC. The signal preferably matches a code on each participant's CD-ROM or DVD, which triggers the playing of the selected video by the PC. If the video is stored on DVD disk or on the user's computer hard drive, or some other storage medium, the video the system could trigger the presentation to play from that medium as
35 appropriate. The case administrator or advisor selects the chairperson for a meeting and gives him or her access to the video clip to be shown at that meeting. In a presently preferred embodiment, only the chairperson has access to the show video icon 2024.

1 The multimedia presentations shown at the meetings may feature well-known or public
figures and other users who may have dealt with the same issues that the participants are facing.
For example, in a meeting for users who have suffered heart attacks, a video clip
5 of a celebrity who recovered from a similar problem may be shown. In the clip, the celebrity
might talk about his or her own heart attack, the bypass surgery that he or she underwent, and the
depression that followed. The celebrity might also describe other struggles that he or she faced,
and how these struggles were overcome during the recovery process. Likewise, video clips of
program participants may also be used to provide motivational examples of success stories, or
10 to express deep-felt emotions (e.g., anger, depression, etc.) that must be dealt with by that
individual and other members of the group to be successful in his or her recovery. Such
presentations may act as a source of motivation to the participants, giving them a sense of hope.
If someone else was able to overcome the same obstacles, they can too. The presentations may
stimulate further discussion during the meeting, and allow participants to open up about the
15 issues and struggles that they are facing during their recovery process.

 The multi-media presentations are not accessible for viewing prior to the occurrence of
an electronic meeting in which the presentations are made for the first time. Thus, prior to a
meeting, users may just view a list and/or summary of videos in his or her CD-ROM, DVD disk,
hard drive, or other storage media. However, once a video is released by a chairperson and
20 played for the first time at a meeting, the participants may access it any time thereafter.

 The system also provides electronic telephone dialing through the meeting room 96A
interface. Each participant has a phone icon 118 in front of his or her avatar. If a participant
wants to talk to any other person in the meeting, he or she may click on the phone icon and the
telephone number to that person is dialed automatically. This allows the members to contact
25 each other after meetings to talk further via regular phone lines if desired.

 Electronic meeting room 96A functions may be implemented through third-party chat
room applications such as Palace, commercially available from The Palace, Inc., Beaverton,
Oregon. A chat room application may be integrated into the system and modified to provide
additional functionality as required by the system. For instance, triggering of multimedia
30 presentations during group meetings and the monitoring of attendance might be separately
programmed into the chat room application.

 Through on-line group meetings, the system allows users to maintain contact with other
people who have the same or similar problems, all in entertaining ways that encourage and assist
the user to adhere to program parameters and achieve program goals.

35 Referring back to FIG. 16B, the subroutine inquires in step 4020 whether the user has
selected the Favorites option 3046 (FIG. 17). Upon a YES answer, the subroutine proceeds to
step 4022 where it displays recipes, articles, Web pages, and the like, which the user has

1 designated as being among his or her favorites during usage of the system. According to one
embodiment, a favorites page includes various sections, each section belonging to a particular
category of favorite items (i.e. recipes, articles, Web pages, etc.). The items listed in each
5 category are linked to corresponding display pages with information on the listed items. For
example, selection of a recipe listed in a favorite recipes section causes the display of detailed
instructions on how to prepare the selected recipe. If the user has selected the My Profile option
3048 (FIG. 17), as inquired in step 4024 of the subroutine in FIG. 16B, the subroutine allows,
in step 4026, the input and/or display of user profile information as well as enrollment into the
10 system's membership directory. Upon enrollment into the directory, other members with similar
goals and hobbies may contact the user and thus gain support and encouragement from each
other.

FIG. 25 is an exemplary illustration of a graphics interface for enabling the user to enroll
into the system's membership directory. The interface allows the user to provide his or her
15 profile information including his or her real or member name, gender, and city and state of
residence. The interface further allows the user to identify his or her lifestyle goals 2032. Such
goals might include stress reduction, weight loss, exercise, nutrition, or smoking cessation. The
user may also provide his or her occupation 2034 and hobbies and interests 2036, if desired.

Referring back to FIG. 16A, the main routine also inquires in step 4030 if the user has
20 selected the Community 3030 (FIG. 17) icon from the main control bar 3026. The Community
3030 icon provides access to various tools to help connect the individual with other members in
similar behavior modification programs. The individual may thus share his or her fears,
struggles, or concerns with members who will probably have faced or are facing the same issues,
allowing the individual to get support and guidance from them. The cultivation of such a
25 community, based on common goals and interests, also reinforces for all community members
the overall behavior modification program's learning and skill-building components.

In a currently preferred embodiment, the system provides group support through a
Meetings option 2052, Coffee Shop option 2054, Bulletin Board option 2056, and Making
Friends option 2058 displayed on the subcontrol bar 3050 upon selection of the Community 3030
30 icon. The selection of this icon invokes the exemplary subroutine illustrated in FIG. 16C. The
subroutine first inquires in step 4032 whether user has selected the Meetings option 2052. If the
answer is YES, the subroutine, in step causes the display of future electronic meetings available
to the individual for participation 4034. The meetings may be divided into categories related to
specific behavior modification programs.

35 FIG. 26 is a screen showing categories of future electronic meeting topics such as cardiac
2040, stress management 2042, weight management 2044, health and wellness 2046, smoking
cessation 2048, and the like. Based on the user's interest or condition, he or she may choose one

1 of the categories to view the sequence of meetings offered for the selected category. For
instance, if the user's behavior modification program is aimed towards smoking cessation, the
user may select the smoking cessation 2048 category to view a list of electronic meeting sessions
5 that address issues relevant to smoking cessation. On the other hand, if the user is a user
recovering from a recent heart attack, he or she might choose the cardiac 2040 category to view
electronic meeting topics such as the ones illustrated in FIG. 27. The displayed meeting sessions
may further provide a summary of the videos 2050 to be shown at the meetings.

Referring back to FIG. 16C, once a user determines the electronic session in which he or
she wants to participate, the subroutine in step 4030 allows the individual to sign up for the
10 meeting via a Schedule Meeting icon. According to one embodiment of the invention, the
system displays the Schedule Meeting icon upon selection of the Meetings option 2052.

If, on the other hand, the user selected the Coffee Shop option 2054 (FIG. 27), as
determined in step 4038, the subroutine allows the user to open chat sessions, enter private chat
rooms, or chat with guest speakers in step 4040. In an alternative embodiment, the user may
15 enter an electronic Coffee Shop during an electronic meeting by selecting a Coffee Shop 76B
icon (FIG. 23).

FIG. 24 is an exemplary illustration an electronic Coffee Shop which allows for one-on-
one meetings with more experienced members. Conversation in the Coffee Shop 76B occurs
20 much like in the meeting room 96A, except that the conversation is not monitored or structured
by a chairperson. The participant enters text at 132 and appears as bubble talk at 134. The
system may provide a record of the conversation in a log window 130. Alternately, such
conversations could be conducted in any number of configurations: text only, voice to text, or
streaming audio/telephony.

In a preferred embodiment, the system allows up to four people into the Coffee Shop 76B
at a given time. Such a restriction may be desirable to support the mentoring aspect of the Coffee
Shop 76B. In the private setting of a Coffee Shop, more experienced individuals can pass on
their experiences and advice as to how to overcome the obstacles that they may be facing to less
25 experienced individuals.

Referring again to FIG. 16C, the subroutine also inquires in step 4042 whether the user
has selected the Bulletin Board option 2056 from the submenu depicted in FIG. 27. If the user
made such a choice, the subroutine causes the display of a bulletin board 4044 for allowing the
user to read and post messages relating to his or her condition, behavior modification program,
and related topics, and receive replies to such messages 4046. The bulletin board, therefore, is
30 an additional group support mechanism for connecting an individual with other similarly situated
people.

1 The subroutine of FIG. 16C also inquires in step 4048 whether the user has selected the
Making Friends option 2058 (FIG. 28). The Making Friends option 2058 allows an individual
to search for other members enrolled in the membership directory with similar behavior
5 modification programs, hobbies, and the like. Allowing contact with people who may be facing
the same problems reassures the individual that he or she is not alone with respect to those
problems. Given the list of similarly situated people enrolled in the membership directory, the
individual may contact these members and receive support, encouragement, and advice from
them.

10 FIG. 28 illustrates exemplary search criteria for finding a desired member from the
membership directory. Upon submission of the search criteria, the subroutine of FIG. 16C
conducts a search 4050 of the membership database for matching the search criteria with profile
information available for each enrolled member. As discussed above in conjunction with FIG.
25, each member enters his or her profile information into the membership directory by selecting
the My Profile option 3048. The system displays 4052 members with profiles matching the
15 submitted search criteria on a Results List 2060 such as the one illustrated in FIG. 29.

Referring again to FIG. 16A, the main routine also inquires in step 4054 whether the user
selected the Kitchen 3032 icon (FIG. 17). Such selection triggers the display of diet and food-
related categories in the subcontrol bar 3050. As illustrated in FIG. 30, those categories might
20 include an Eating Right option 2062, a Food Diary option 2064, a Home Cooking option 2066,
and a Why Cook? Option 2068.

Selection of the Kitchen 3032 icon further invokes the subroutine illustrated in FIG. 16D.
The subroutine starts by investigating in step 4056 whether the user selected the Eating Right
option 2062. If the answer is YES, the subroutine displays in step 4058, several categories of
25 information pertaining to food and diet available for selection by the user. As portrayed in FIG.
30, selection of one of those categories causes the display of a list of articles or informational
materials relevant to the selected category. For example, a person in a weight loss program
might select a Weight Control category 2070 for viewing articles 2072 germane to weight loss.
The user may also conduct searches of key words 2074 to find articles or information materials
30 containing the key words desired.

The subroutine in FIG. 16D also determines in step 4060 whether the user chose the Food
Diary option 2064 (FIG. 31). An affirmative answer causes the subroutine to display in step
4062, an electronic food diary 2076 for inputting and/or viewing food intake information. The
electronic food diary 2076 allows the user to periodically keep track of his or her eating habits
35 to determine the amount of calories, fat, cholesterol, and the like, consumed.

In a preferred embodiment, the food diary 2076 is coupled to a food and ingredients
database that stores a list of food and ingredients according to their brand or generic names. The

1 database preferably also stores calorie and nutritional information associated with a food or an
ingredient. A user accesses the database when filling-out his or her food diary. In doing so, the
user selects either a breakfast 2078, lunch 2080, or dinner 2082 category. In response, the system
5 displays a pull down menu of foods belonging to the selected category. After the user selects the
item from the pull down menu, the system inserts the food item consumed into the food diary.
The user also includes the number of servings 2084 consumed, the time 2086 he or she consumed
the food, the level of appetite 2088 the user had at that time, the emotions he or she was feeling
2090, and the activity 2092 that he or she was performing (e.g. watching TV) during
10 consumption. Based on the information, the system automatically calculates the total amount
of calories 2094 consumed for a meal. The system further calculates a daily total 2096 of the
total amount of calories consumed for the day. The calorie information is also broken down to
the amount of calories from fat, and the total amount of cholesterol, sodium, and fiber the
individual consumed for the day. Reports can be generated from the other parameters to make
15 the user more aware of his or her eating patterns.

Referring back to FIG. 16D, the subroutine proceeds to inquire in step 4064 whether the
user has selected the Home Cooking option 2066. Upon an affirmative answer, the subroutine
allows the user to search and view recipes in step 4066 that conform with the individual's
behavior modification program. FIG. 32 illustrates a Recipe Finder 2100 for conducting searches
20 of recipes stored in a recipe database. The user may conduct searches based on the type of meal
course 2102 (e.g. appetizers, salads, soups, main courses, basics, side dishes, desserts, or all meal
courses). The user may also conduct searches based on the desired ingredients 2104 as shown
in FIG. 33. The Recipe Finder 2100 further permits the user to search recipes based on his or her
dietary requirements 2106. For instance, if the program calls for the user to consume only a
25 certain amount of calories, or a certain amount of fat, the system incorporates this information
in the search criteria to find recipes that match the criteria. FIG. 34 depicts an exemplary search
for recipes based on a user's dietary requirements 2106.

The user may view the recipes retrieved by the Recipe Finder 2100 by selecting a view
recipe icon 2108 (FIGS. 32-34). FIG. 35 illustrates an exemplary recipe including customary
30 ingredients information 2110, cooking instructions 2112, and cooking time information 2114.
The recipe further provides nutritional information 2116 such as the total amount of calories, fat,
cholesterol, sodium, and fiber associated with the displayed recipe. The nutritional information
presented might be important, for example, to a user whose behavior modification program
requires that only a certain amount of calories or grams of saturated fat be consumed per day.

35 The system may alternatively display a virtual chef who provides cooking instructions
to the user. In fact, the system might provide virtual characters for providing instructions,
motivation, or guidance in other areas as applicable. The virtual characters might take the form

1 of flash animation, motion capture, real-time broadcast, or video. A user might interact with the virtual character via e-mail and the like. Users might also interact with the virtual character during a chat session hosted by the character. A virtual character adds a reality element to the system, which helps promote such interaction between the user and the virtual character.

5 If the subroutine in FIG. 16D determines, in step 4068, that the user has selected the Why Cook option 2068 (FIG. 30), the subroutine, in step 4070, enables the user to conduct a search for restaurant and food delivery information in the user's geographical area. The allowable search criteria may include, for example, location, type of food, price range, and the like. According to one embodiment, the system also allows the user to place orders to an identified restaurant or other food delivery service via the Internet.

10 Referring back to the main routine in FIG. 16A, the main routine also inquires in step 4080 whether the user has selected the Gym 3034 icon from the main control bar illustrated in FIG. 17. If such a choice was made, a subroutine as the one illustrated by FIG. 16E is invoked. If the user has accessed the Gym icon for the first time, the system provides introductory information about exercising by a virtual character 2120 as displayed in FIG. 36. This information is alternatively provided through a video clip triggered through the selection of the Gym icon for the first time. The virtual character performs the functions typical of a personal trainer, guiding and motivating the user in his or her exercise program.

15 Selection of the Gym icon further causes the display of a Work Out option 2128 and a Training Tips option 2130 on the subcontrol bar 3050. The system also invokes a subroutine such as the one illustrated in FIG. 16E. The subroutine first inquires whether the Work Out option was selected 4082. If the answer is YES, the subroutine causes the display of the user's individualized exercise program 4084, such as the one shown in FIG. 37, along with a graphical illustration of each exercise 2124 and the number of repetitions to be performed for each exercise. Selection of an illustrated exercise invokes a video demonstration 2126 of the exercise as shown in FIG. 38, guiding the user in its correct implementation. Alternatively, the virtual character might himself or herself demonstrate the exercise.

20 If the user wants to add exercises to his or her current exercise program, he or she may do so by selecting the exercises from an Aerobics exercise list, Strength training exercise list, and/or Flexibility exercise list.

25 If the subroutine of FIG. 16E determines, in step 4086, that the user has selected the Training Tips option 2130 (FIG. 39), the subroutine allows the user to the search and display exercise-related tips and information in step 4088. The user submits search terms through a search window 2132 as shown in FIG. 39. The Training Tips option also allows the user to display introductory information 2134 and training tips on specific types of exercises, such as

1 the individual's personalized exercises 2136, aerobic exercises 2138, strength exercises 2140,
and flexibility exercises 2142.

5 Referring again to the main routine of FIG. 16A, the main routine also inquires in step
4090 whether the user has selected the Tranquility Park 3036 icon (FIG. 17). If the answer is
YES, the system displays a My Program option 2150, Progressive Relaxation option 2152, and
Take A Break option 2154 on the subcontrol bar 3050 as illustrated in FIG. 40. In addition, the
system invokes a subroutine such as the one illustrated in FIG. 16F. The subroutine first inquires
10 in step 4092 whether the user selected the My Program option 2150. An affirmative answer
causes the subroutine to display a default page in step 4094, allowing access to the user's
personalized stress management program. In a preferred embodiment, each session in the user's
stress management program comprises an electronic excursion through a Stress Management
Park. The excursion might be guided by a virtual psychologist to aid the user in stress
management techniques. FIG. 39 shows a Stress Management Park 2170 with exemplary
15 excursion sites. During each excursion, the user earns one or more pieces of gear or equipment
that function as a stress management tool. The user also keeps a Stress Management Log during
the tour. The log might be implemented as a separate tool accessible from the subcontrol bar
3050 upon selection of the Tranquility Park 3036 icon. Alternatively, the log might be
implemented as part of the electronic journal which is accessible upon selection of the Journal
20 option 3042 (FIG. 18).

One purpose of the log is to help the user learn how to reduce daily stress by applying the
tools gained during the excursions. The user also preferably reviews the Stress Management Log
before proceeding to the next excursion to consolidate what he or she has learned so far and
apply it for the next excursion. The information and interactive exercises of the stress
management program itself are thereby reinforced by being applied on a daily basis.

25 Excursion 1 takes the user across Stress Canyon 2156 in which the user identifies stress
in his or her life. Excursion 2 takes the user around Hourglass Butte 2158. In this session, the
user learns about time management and problem-solving by taking a self-assessment quiz. An
exemplary self-assessment quiz is shown in FIG. 41. Excursion 3 heads into Echo Mountains
30 2160 where the user learns to modify negative thoughts that create and amplify stress. Excursion
4 leads the user to Perspective Point 2162. In this session, the user learns common-sense ways
of dealing with stress to give the user a larger perspective on life. Excursion 5 crosses a Raging
River 2164 where the user learns to control anger. Excursion 6 ends up in Harmony Meadows
2166 to teach the user effective and assertive communication skills. At the end of the excursions
35 through Stress Management Park 2170, the user will have picked up different kinds of stress
reduction tools and will most likely have learned which situations call for which tools to help
him or her deal with a stressful situation.

1 Referring back to FIG. 16F, the subroutine next inquires in step 4096 whether the user
selected the Progressive Relaxation option 2152 (FIG. 40). Upon such a selection, the
subroutine, in step 4098, guides the user through various types of relaxation techniques to help
5 him or her release tension in the body and stress in the mind. In a preferred embodiment, the
system bases the types of relaxation techniques on the user's stress management program.
During each excursion in the Stress Management Park 2170, the user practices a stress relaxation
technique that complements the tools and skills presented in the excursion. FIG. 42 is an
exemplary illustration of various types of relaxation techniques 2172 that the system might use
10 with an individual's Stress Management Program.

Referring again to FIG. 16F, the subroutine also inquires in step 4100 whether the user
selected the Take Break option 2154 (FIG. 43). Upon a positive answer, the subroutine presents
the user with one or more choices of relaxation audio and video materials in step 4102. FIG. 43
illustrates exemplary choices of such relaxation materials. If the user selects one of the choices,
15 the subroutine proceeds to play the corresponding relaxation video and audio in step 4104, to
soothe the individual's body and mind.

The main routine in FIG. 16A further inquires in step 4106 whether the user has selected
the Library 3038 icon (FIG. 17). In such instance, the subcontrol bar 3050 displays, as illustrated
in FIG. 27, a Research option 2160 and an Employee Assistance option 2162. The main routine
further invokes a subroutine as the one illustrated in FIG. 16G. The subroutine inquires in step
20 4108 whether the Research option was chosen. If the answer is YES, the subroutine continues
to step 4110 where it displays a search engine for accessing articles and references in a Library
database, as well as information on the World Wide Web. FIG. 44 is an exemplary screen
display of a search engine upon the selection of the Research option 2160. An Archive 2164
25 section of the search engine allows users to view exercise and nutritional information. A
References 2166 section provides a description of various health-related reference materials
where the user might find, for instance, prescreened information on doctors, clinics, rehabilitation
centers and the like, via the Internet. A Resources 2168 section provides selected links to World
Wide Web health and lifestyle sites of particular interest. The search engine also allows a user
30 to conduct a search of key words 2170 of articles and references, and enter Web site addresses
2170 to jump to a known Web page.

The content in the Archive 2164, References 2162, and World Wide Web 2168 resource
sections may change based on the user's progress with his or her behavior modification program.
For instance, if the system determines that the user is not making progress to achieve the desired
35 goals, additional information and aid specifically catered to help the user to make the necessary
progress is presented to the user.

1 If the subroutine illustrated in FIG. 16G determines in step 4112 that the user selected the
Employee Assistance option, it displays special employee programs offered by the user's
employer in step 4114. Such programs may range from employee carpooling information to
5 suicide hotlines, and the like.

Referring back to FIG. 16A, if the user selects to Log Off, as inquired in step 4120, the
process ends in step 4122, and the process terminates the user connection with the system.

FIGS. 45-72 illustrate an alternative embodiment of a system interface 18 (FIG. 1)
allowing user interaction with the system. Referring to FIG. 45, the user interface for users in
10 the clinical and wellness groups is organized around a village motif. The user progresses through
the system by following paths through a graphically represented town square to destinations
including the village gymnasium 71, tranquility park 72, post office 74, coffee shop 76, store 78,
library 80, travel agency 82, as well as the user's own "home" 84. The village motif presents the
user with an image of a community of support. The entire on-line community revolves around
15 his or her recovery and well-being, and this helps bolster the user's confidence and motivation.
Furthermore, the village motif provides an easy-to-understand representation of the system's
structure. The user learns to navigate the system more quickly and easily because of the intuitive
town layout.

Another benefit of the village motif is its familiarity. A user afraid of technology will be
20 reassured through the symbolic images of home and neighbor, street and store. Finally, the user
may find navigating an electronic "neighborhood" more enjoyable than a traditional text-menu-
driven system. Other user interfaces, such as the one described in conjunction with FIG. 72, are
also available.

Referring to FIG. 46, the inner core 86 of the village provides the user with a schedule
25 book icon 90, a journal icon 94, a meeting room icon 96, a mail icon 98, and a rewards icon 92.
These give the user access to additional tools that assist with complying with his or her health
program, and further help the health advisor monitor such compliance.

Referring to FIG. 47, upon selection the schedule book icon 90 from the interface of FIG
46, the system displays a graphical representation of a schedule book 90A. As shown in FIG.
30 48, the schedule book presents the user with a list of meetings that the user can participate in via
his or her computer. The list of meetings varies for each user depending on his or her specific
health recovery program. The schedule book also presents general information on the meetings,
including time 100, date (not shown), and meeting profile 104, with a notation of how many
people have signed up for the meeting 106. The system also sets a limit on the maximum
35 number of individuals that may sign up for a meeting.

Based on this information, a user may then sign up for the meeting that best fits his or her
schedule. Other factors, such as the city in which the other members are located 108 may also

1 influence the user's choice. A user may decide to join a group whose members are located in his or her home city if he or she wants to meet these people face-to-face someday.

5 The system integrates the user's schedule book 90A with the user's personal electronic daily calendar. For example, after a user signs up for a meeting, the system downloads the day and time of the meeting to the user's calendar. The calendar may be any suitable commercial calendar or organizer program, such as OrganizerTM available from Lotus Development Corp.

In an alternate embodiment, the user may make a further request via the schedule book for automated reminders to be sent to him or her by e-mail.

10 Referring again to FIG. 46, the system also enables the user to access an integrated user journal 94 from the village's inner core and self-report their progress and describe their feelings. Selection of a journal icon leads the user to a journal 94A like one shown in FIG. 49. Upon entering the journal 94A, the user has the option to view the personal goals that have been set for him or her by the physician or case administrator. The journal also provides a diary used to make a daily record of information pertinent to accomplishing the user's goals. The journal 94A provides an important tool that lets the user express his or her feelings and fears in a context other than that of a support group. By journaling, the user can identify fears concretely, and thus begin to address them. Goal setting is also often more meaningful when it is written down. Instead of merely thinking about ambiguous hopes, users can define in written form the concrete milestones they plan to attain. These notes can also help remind the user of matters he or she might wish to discuss in support group meetings. The system also uses certain notations in the journal to assist in generating reports to the health advisor regarding the user's progress. As part of its overall security measures, the system separates those journal entries that the user wishes to keep private from those which are to be used in generating reports.

25 FIG. 50 exemplifies the type of information that may be contained in the journal. For instance, a heart user belonging to a clinical group may need to monitor his or her emotions 100 as well as the exercises he or she has been doing 104 by means of the journal. Depending on the user's program, the system might also prompt the user to input his or her vital signs 102, such as blood pressure and heart rate, in the journal. This can be done manually or automatically. For example, devices can be hooked into the computer's serial port for automatic input of blood pressure and heart rate into the system. Depending on the particular program, users might be required to weigh themselves on a weekly basis and/or measure their cholesterol level with a home cholesterol kit on a relatively less frequent basis. This information is stored in the system's database and is accessible to the physician and case advisor.

35 The kind of information required of a person in the wellness group may differ from this. For example, if a user is in the wellness group because a family member is suffering from a chronic illness, it will not be necessary for him or her to input vital signs into the journal. Rather,

1 information as to how he or she is doing emotionally, as well as information as to how much group support he or she is getting, may be solicited.

5 The user may also record his or her personal comments in the journal. This information may only be viewed by the individual user, and is not available to the health advisor.

The journal is also integrated with the user's daily calendar. The user may, for example, input information as to his or her exercise schedule (such as 30 minutes walking on Tuesdays, Thursdays, and Saturdays) or meditation schedule into the journal. The system then downloads this information into the user's daily calendar. Previous journal entries may also be viewed.

10 In addition to allowing the user to electronically enter his or her updated health information, the journal also provides the health advisor with a means of getting feedback on the user's progress. The information recorded in the journal is electronically forwarded to the case advisor. Alternatively, the case advisor has direct access to portions of the journal stored in the system's database. The health advisor can use the information provided in the journal to update the program on an on-going basis.

15 The system also accepts additional user data obtained during office visits or directly from the user via e-mail or other means of communication. The physician or health advisor may also input additional data, such as that derived from laboratory tests, into the system. Accordingly, the system accepts updated user data directly from the user and through data entered by the physician during office visits (blocks 1030, 1032 and 1034, FIG. 98).

20 The system automatically correlates the user's input with the physician's to check for accuracy. In addition, the system automatically provides the physician with reports of user progress. Depending on the user's plan requirements, the case advisor periodically reviews the user-reported and physician-reported input to monitor whether the user is complying with program parameters and meeting goals (block 1036, FIG. 98).

25 As part of the feedback process, the system provides an "alarm" option (block 1040, FIG. 98). The system compares actual data about the user with the goals and parameters residing in the system's database and automatically notifies the health advisor via e-mail or facsimile (or pager depending upon the severity of the problem), if a health risk is present (block 1042, FIG. 98). For instance, if a user's current blood pressure is potentially dangerous, the system will automatically send an alarm to the health advisor and require his or her immediate action.

30 If the difference between current data and goals does not present a threatening situation, the system will simply notify the health advisor that these goals are not being met. For example, if the current data states that the user has lost 5 pounds instead of 10, the system will notify the health advisor of this fact. This information, although not life-threatening, must nonetheless be addressed by the health advisor. He or she may then contact the user in order to support and to further motivate him or her to meet the desired goals (block 1044, FIG. 98). In addition, the

1 health advisor may recommend that the program be modified to suit the user's condition (block 1046, FIG. 98).

5 Regardless of whether an alarm condition exists, the system periodically correlates the updated user health information with the program goals to determine the user's progress and compliance with the program (block 1050). If the user is progressing in accordance with his or her program, the system informs the physician and/or case advisor (block 1052, FIG. 98). The health advisor may then provide positive reinforcement to the user. Depending on the user's progress, the health advisor can also determine whether to modify the program by altering the goals or moving the user into a different diagnostic category. The user may even be removed
10 from the system if he or she has met program end goals (blocks 1054, 1056, FIG. 98).

The system also notifies the health advisor if the user is not progressing toward program goals or is not using the system (block 1060, FIG. 98). The case advisor along with the physician then determines whether to modify the user's program, provide the user with additional support,
15 or remove the user from the system (blocks 1064, 1066 and 1068, FIG. 98).

The system also enables direct feedback to the individual user. As one of the features of the journal, users may view their levels of compliance and achievement of goals. Users may not recognize they are making progress until presented with reminders of how much they have improved. System generated charts and summaries, discussed below with respect to FIGS. 76-
20 79, provide users with an overview of how far they have come.

Referring again to FIG. 46, as another tool to assist users to comply with their programs, the system offers an electronic meeting room and group support room interfaces via meeting room icon 96 through which a user receives on-going, on-line group support. The mail icon 98 gives a user access to the e-mail feature for allowing users to keep in constant contact with their physician, case advisor, or other users of the system. Although in the presently preferred embodiment of the invention communication is done via e-mail, other methods of communication may also be used. For instance, it is envisioned that the system will allow instant messaging, conference calls, and/or video conferencing as alternate means of communication.
25 A user may also access his or her e-mail by selecting the village post office 74 shown in FIG. 45.

Referring to FIG. 51, the system includes four different types of e-mail options: letters 140, postcards 142, telegrams 144, and audio e-mail 146. FIG. 52 is an example of a letter 140A, which functions as standard e-mail. FIG. 53 is an example of a postcard 142B, which may be used to send short notes. For instance, postcards may be sent to users to survey the level of satisfaction with the service provided by the system. The postcard would contain questions on this issue, and users would be asked to send the postcard back after having answered the
30 questions.
35

1 FIG. 54 is an example of a telegram 144A, which has the highest priority among the types
of e-mail provided by the system. The telegram may be used, for instance, to alert a user that he
or she has missed a meeting, or just as a short note of encouragement by the case advisor or
5 group leader to an individual user.

FIG. 55 is an example of an audio e-mail 146A notification. Upon clicking this icon,
users can hear a recording of the message sent to them via speakers attached to their PCs.

The communications functionality may be implemented by integrating any one of a
number of conventional e-mail programs with the system.

10 As will become more apparent from a detailed description of the system's other
interfaces, the system takes a two-pronged approach to behavior modification: education and
motivation. Entertainment is used as a means of both educating and motivating a user to make
the sometimes difficult changes required for recovery or even for maintaining a healthy lifestyle.

Motivation is one approach to behavior modification. It is the path from education to
15 compliance, which is a goal of the system as a whole. The support group and case advisor
described above add a human element to this motivational component. Users are more likely to
respond positively to the encouraging words of others than they would be to a program which
must be followed in isolation.

The system's multimedia capabilities allow it to use graphics, videos, and music to
20 communicate and educate. These features provide a refreshing boost to the user's endeavor to
modify his or her behavior, replacing the drudgery typically associated with clinical medical
rehabilitation programs. Segments featuring celebrities, medical experts, motivational speakers
and successful program participants delivering motivational speeches and personal testimonials
25 further inspire the user. Humor is integrated throughout the system, for example in the
whimsical artwork. The entertainment derived from these features of the system is used to spark
and maintain the user's interest in the unfolding drama of his or her recovery and lifestyle
change.

The rewards feature is yet another motivational tool provided by the system. Referring
again to FIG. 46, the reward "apples" icon 92 allows a user to view information on the rewards
30 point system and how it works, as well as the user's own personal rewards account. The reward
points may be exchanged for goods in the village store 78 or may be accumulated as frequent
flyer miles for being redeemed for plane tickets in the village travel agency 82, respectively.

Education is a complementary behavior modification approach offered by the system.
Education is provided through informative on-line multimedia presentations and the interactive
35 areas of the village devoted to diet, exercise, and stress management. For example, the recipes
provided in the village kitchen, discussed below in conjunction with FIGS. 56-59, are designed

1 to improve users' diets without forcing them to take on impossible austerities or give up their love for food.

Exercise and stress management programs, discussed below in conjunction with
5 FIGS. 61-66, are designed both to allow for variety and to lie within the individual user's ability range. By making exercise and a healthy diet both feasible and interesting, the system enables users to stick with their new lifestyles.

The system also provides relevant articles and includes hyperlinks to other, reputable Internet sites devoted to providing medical and health-related information, as discussed below
10 in conjunction with FIGS. 67-70.

Referring again to FIG. 45, the system encompasses a "home" 84 interface as part of the village motif. Upon its selection, a screen showing the inside of the user's "home" 84 follows, as depicted in FIG. 56. Once inside his "home" 84, the user may access the kitchen by selecting the kitchen icon 150.

FIG. 57 illustrates the interior of the user's kitchen 155. Once in the kitchen 150A, users
15 have the option to get nutritional and dieting information from low-fat cookbooks 153, or view and print recipes from a recipe book 154. FIG. 58 gives an example of a recipe which may be contained in the recipe book 154.

Referring again to FIG. 57, users also have the option to prepare and print a shopping list
20 156. A user may chose several recipes from the recipe book 154, and the system can automatically enter the ingredients into the user's shopping list 156. The user can also manually enter items into the shopping list 156 via his or her PC keyboard. FIG. 59 gives an example of a user's shopping list.

The system can also indicate which recipes are allowable under the particular user's
25 program. For example, the system might recommend certain low-fat items that meet the criteria of a user's program as well as suitable foods he or she might consider when eating out. The system is also capable of generating weekly shopping lists based on program parameters. According to personal preference, users may choose to substitute certain allowable foods for others.

Moreover, users have access to a pull-down computer menu by selecting the computer
30 menu icon 152. From this computer menu, users can access various educational topics related to food, nutrition, and diet. One such topic may, for instance, relate to the basic food groups and may provide information as to the suggested amount of servings for each category of food, as shown in FIG. 60.

The guest chef 158 option shown in FIG. 57 further allows users to view audio or video
35 clips of a chef showing how to prepare a certain recipe. In the presently preferred embodiment,

1 these clips are contained in the user's CD-ROM or DVD, but with proper technology could be sent via streaming audio or video.

5 From the kitchen, a user may substitute foods (e.g., asparagus for broccoli); access and print food related articles; view new recipes or articles by selecting the "what's new" button (not shown); or join a discussion group via a bulletin board (not shown).

Referring again to FIG. 45, another part of the village motif is the village gymnasium 71, which is used by the system to make recommendations or supply information regarding suitable exercise routines. Each exercise program is generated according to individualized parameters and needs, with progress being regularly charted by user input via the journal 94A (FIGS. 49-50).

10 Upon entering the gymnasium 71, a user may view featured video clips or listen to audio clips; do key-word searches to access and print exercise related articles; read and print exercise manuals; or join a discussion group via a bulletin board.

FIG. 61 illustrates the inside of a gymnasium 71 shown in FIG. 46. Shown here are various exercise topics 160 that a user may access. For instance, selecting the stretching topic 162 gives the user information on recommended exercises for stretching different muscle groups. FIG. 62 illustrates one such stretching exercise.

15 Similarly, selecting the strength training topic 164 gives the user information on recommended exercises to help strengthen various muscle groups. FIG. 63 illustrates one such strength training exercise.

20 Referring again to FIG. 46, the village tranquility park 72 focuses on stress management strategies, including relaxation techniques, biofeedback, yoga, and meditation. Upon entering the park 72, a user may access and print articles on stress management subjects; view video clips or listen to audio clips on these subjects; and join discussion groups via a bulletin board.

25 An expanded illustration of the tranquility park 72 is shown in FIG. 64. Upon selection of the relaxation option 170, an instructional article on the subject is invoked, as shown in FIG. 65. Similarly, upon selection of the yoga option 172, an instructional article about yoga is invoked, as shown in FIG. 66.

30 Referring back to FIG. 45, the system also gives access to a village library 80 which allows users to research germane topics. Thus, users interested in learning more about their medial condition may access the library 80 in order to educate themselves on the topic.

35 FIG. 67 illustrates the interior of the library 80. From here, a user may select an Articles option 180 to gain access to an available list of articles 186 via his or her CD-ROM, as shown in FIG. 68. The kind of articles 186 available to a user will vary depending on the type of user. For instance, if the user suffers from a chronic cardiac condition, the articles 186 will all relate to such topic. The list of articles 186 is updated on an ongoing basis to reflect new developments and research on the topic.

1 Users are also provided with hypertext links 188 to other reputable Internet sites devoted to providing medical and health-related information. These Internet sites may also be accessed by selecting the world wide web option 182 as shown in FIG. 67.

5 Once linked to an Internet article, a user is taken to a separate web browser from which he or she may navigate the web. FIG. 69 is an example of an Internet site to which a user might get connected upon selection of the World Wide Web option 182 of FIG. 67.

Furthermore, users have access to a pull-down menu by clicking the menu icon 184. From this menu, users can select various educational topics germane to the user's condition. For instance, an article available through the pull-down menu may teach a user suffering from a chronic cardiac condition how to determine his or her target heart rate zone, as shown in FIG. 70.

10 Users may also do key word searches to access and print articles of interest, to view featured video clips, or listen to audio clips.

Referring again to FIG. 45, the village store 78 and travel agency 82 are two additional interfaces accessible to users. Upon entering the store 78, users are taken to an in-house or third-party web site through which they may order relevant items, either on-line or by telephone.

Users may also search the store database and view product information, including pictures, descriptions, and prices of products. Moreover, users may view the status of their orders and contact customer service via e-mail or telephone.

20 Similarly, when a user enters the travel agency 82, he or she is linked to a third-party co-branded reservation system. FIG. 71 illustrates the inside of travel agency 82. From here, a user may make on-line travel reservations by selecting a Reservations option 202. A user may also view the frequent flier miles he or she has accrued so far by selecting a Check Reward Points option 200. As discussed above, a user may gain frequent flier miles by good participation in the program and reaching certain milestones.

25 FIG. 72 illustrates yet another embodiment of the user-interface for clinical and wellness group members. A multi-frame screen is shown which includes: a main navigation area 210; content area 212; message or video screen area 214; and an instructions area 216. The message or video screen area 214 may be used to show advertisements. The instructions area 216 may be used as a "What's New" area or for the bulletin board functionality discussed above for the kitchen 150A (FIG. 57), gymnasium 71 (FIG. 61), and tranquility park 72 (FIG. 64) interfaces.

30 FIGS. 73-96 illustrate user interfaces for the case advisor, administrator, and HMO, some of which are also accessible by the user. Unlike the user interface for users, the navigation for the physician/case advisor is generally less graphical and more chart oriented.

35 Referring now to FIG. 73, a log-on screen 220 for the user interface for a physician/case advisor is shown. The screen 220 requires the health advisor to input their name 222 and

1 corresponding password 224. Screen 220 thus acts as a security measure by ensuring that only legitimate users are able to gain access to the system.

5 Referring to FIG. 74, an initial screen containing a main menu 230 of the options available to the physician/case advisor follows the log-on screen 220. A Design Program For User option 232 allows a physician/case advisor to create a new program or modify an existing program for a user, as described above in conjunction with FIGS. 3-15.

A second option within the main menu 230 is a Review User Record option 234 which allows a physician/case advisor to review the health record of a particular user.

10 A list of current users (not shown), substantially similar to the list shown in FIG. 11 follows upon selection of a Review User Record option 234.

Referring now to FIG. 75, a health record of an exemplary user is shown. The record may provide identifying information, including the user's name 240, subscription ID 242, and social security number 244. Furthermore, information as to the total amount of time that the user has been participating in the program may be given as shown at 246.

15 Column 258 shows the user's vital signs and other health-related factors, such as blood pressure 250, number of cigarettes smoked per day 252, amount of physical activity 254, weight 256, and cholesterol level 258. Some of these factors may be monitored and reported on a weekly basis, as shown in columns 260-268. Other factors, such as the user's cholesterol level 258, may be monitored and reported on a bi-weekly basis, as shown in columns 260, 264, and 268. The ultimate goal to be achieved in each of the specified areas is given in column 272.

20 A list of the risk factors which may affect the user's recovery may further be pin-pointed as shown at 270.

Vital signs may be represented graphically for the user, physician and case advisor. 25 These may include charts or graphs of the user's blood pressure 250A (FIG. 76), physical activity 254A (FIG. 77), weight 256A (FIG. 78), and cholesterol level 258A (FIG. 79). These graphs allow the physician/case advisor to review and grasp the user's progress visually over a period of time, and help him or her determine how the user is doing in relation to the ultimate goals that are to be achieved in the charted areas.

30 Referring again to FIG. 75, a physician/case advisor is also given an option 274 to assess the user's behavior. Upon selection of this option, the system provides a behavioral change assessment form 305 like the one shown in FIG. 80. This form 305 is used to determine how inclined the selected user is toward complying with the recommended program. In the preferred embodiment, on-line questionnaires are submitted to the users, asking them to rate their behavioral intention 300, self-efficacy 302, and social support 304. Alternate forms of evaluation 35 may also be used to assess the likelihood of a user's compliance with the program.

1 The system periodically assesses and reports the user's behavioral change as shown in
columns 306 and 308. The desired goals 310 are also listed to monitor whether the user is
making progress towards them. If a user continues to score low on the behavioral change
5 assessment form 305, this may indicate that he or she is unable to make the commitment
necessary to change his or her lifestyle, and lead to the conclusion that the user should be taken
off the system.

 The system generates reports on user progress based on the data shown in FIGS. 75-80,
as frequently as the physician desires. These reports can be received via either e-mail or
10 facsimile. The frequency of reports will depend on the needs of the particular user, and may be
triggered by the achievement of goals or the setting off of alarm signals as described above.

 The system can also generate regularly scheduled reports for a physician's review on a
default basis, depending on a user's needs. For example, users who are relatively ill can be
reviewed twice a week or more, even if no warning signals occur.

15 Upon receiving feedback from the system regarding changes to a user's behavior
modification program, a physician or case adviser may want to make recommendations about the
program. FIG. 81 shows an exemplary recommendation screen which follows the selection of
a Recommend 276 option of FIG. 75. If, for example, a user initially placed on a program of
walking 15 minutes three times a week loses 5 pounds and lowers his or her blood pressure, the
20 system might generate a report to the physician recommending an increase in the user's walking
time to 45 minutes per session as shown at 322. The system may further make recommendations
as to the frequency and duration of stress reduction exercises 328 as well as on other areas of the
program as shown at 326. The physician reading the report can accept 330 or modify 332 the
recommendations.

25 The system's reporting features enable a physician to handle more users in the same
amount of time without decreasing the quality of care. The system also allows for a user
feedback loop independent of this self-monitoring capability. If the user has a difficult night, for
example, he or she can send an e-mail through the system directly to the case advisor or the
physician via the mail 98 (FIGS. 46, 51-55) or post office 74 (FIG. 45) interfaces.

30 Once the physician/case advisor is satisfied with the recommendations, he or she may
electronically communicate 334 program changes to the subscriber.

 FIG. 81 also shows an example of a user who has earned reward points 324 for not having
smoked for 60 days. The reward points shown here are to be cashed in at the village store 78
shown in FIG. 45.

35 Referring to FIG. 82, the system presents a message screen upon the selection of a
communications 334 option of FIG. 81. The case advisor may send the recommendation 346
made by the system and if appropriate reviewed and/or modified by the physician, to the

1 subscriber 340 with an attached audio e-mail message 344, or alternately via text e-mail or
facsimile. A copy of the recommendation 346 and message 344 may also be stored in the
system's database 342.

5 Physicians/case advisors may further communicate with users by video conferencing.
An existing third-party video conferencing package may be integrated to the system to allow the
video conferencing feature. The minimal requirements for a PC to support the video
conferencing capability is a clock cycle of 90 megahertz, 24 megabytes of random access
10 memory, a color camera, a video capture board, an audio board, a video input capture board, and
an ISDN line. The technical specification may change as technology affecting bandwidth and/or
data compression changes.

As shown in FIG. 82, the video conferencing feature may be accessed upon selection of
a video conferencing option 347. A video conferencing manager, like one illustrated in FIG. 83
may then be used to conduct the video conference.

15 A health plan payor, such as an HMO, insurance company, or self-insured employer, may
also access the system. Information that is released by a user may also be sent electronically to
the health plan payor. The information can then be combined with the provider's information
to analyze individual users or aggregate results of all people on the program. The analysis may
include, for example, cost per user, cost for users in each category or group, and physician
20 utilization. The system's relational database allows for the custom gathering of data, depending
upon the requirements of the health plan. The system may also provide aggregate reports to the
health plan payor for management review and cost control purposes. A health plan payor is
probably less interested in looking at individual user files than in looking at information as to the
number of subscribers on the system, the cost of keeping the subscribers on the system, and how
25 this cost compares to that incurred by users who are not on the system. However, to address the
security issues that may arise in giving health plan payors access to the system, the system
provides several layers of electronic security measures to ensure the individual user's privacy,
and strictly segregates the type of information available to the various parties who have access
to the system.

30 Referring now to FIG. 84, a general system administrator provides various degrees of
access to the system to other administrators and health advisors. For instance, an administrator
5000 identified as such may be given access to system database contents 5002 including access
to all users. Such an administrator can modify the existing database content or add new content
to the system database. FIG. 85 illustrates an exemplary screen for modifying nutritional
35 program levels. Exercises may also be added and/or modified as illustrated in FIG. 86. In
addition, the administrator may set up the electronic meeting topics and schedules, as well as add
and/or modify contents in the Library database.

1 The user interface for the health plan payor is similar to the user interface used by a physician/case advisor. When the health plan payor signs onto the system, a main menu screen with a list of options available is provided, as shown in FIG. 87. From here, the payor may
5 choose to view overall compliance status 350, perform case management review 352, perform an utilization review 356, review outcomes 354, or communicate 358, each of which options is described in further detail below.

Upon selection of a view compliance status 350 option, the health payor views current compliance status based on pre-determined categories 360, as shown in FIG. 88. For each
10 category, information as to the total number of eligible users 364, number of participating users 366, participating users complying with the program 368, participating users put on probation due to lack of compliance 372, and users terminated 376, may be displayed. A comparative cost analysis screen is also invoked via a view comparative costs option 362. FIG. 89 shows an example of the cost of maintaining users on the system. The total cost 380 may be compared
15 against costs incurred by a control group of users who have not subscribed to the system 382. Comparative savings achieved by use of the system are shown in column 384.

Referring back to FIG. 87, the main menu 348 also includes perform a case management review 352 option. A list of current users (not shown), substantially similar to the list shown in FIG. 11, follows selection of this option.

20 Once a user file has been selected, a confidentiality waiver information 390 is displayed, as shown in FIG. 90. A user will be assured confidentiality and privacy in the areas where waiver has not been given. For instance, portions of the user's journal will be kept confidential and unavailable to the health plan payor, ensuring that users remain open and honest in making daily journal entries.

25 Upon selection of a continue option 392, a screen similar in content to the screen shown in FIG. 75 is shown in FIG. 91. As with the user interface for physicians/case advisors, indications of the user's blood pressure level 404, physical activity 406, weight 408, and cholesterol levels 410 over time, are given. These may also be represented graphically to the health plan payor in a form substantially similar to FIGS. 76, 77, 78, and 79 respectively.

30 A health plan payor, however, has a review costs option 400 which is not available to a physician/case advisor.

FIG. 92 illustrates an exemplary screen viewable upon selection of the review costs option 400 of FIG. 91. Shown here is information as to the costs incurred to date in maintaining the selected user on the system. The system costs 410, health service costs 412, and total costs
35 414 are represented in a bar graph format in this particular example. The cost incurred by a control group user who is not on the system is also shown 418. This cost is compared to the total

1 costs 414 and the amount of savings 416 thus achieved, and is also displayed in a bar graph format.

5 Referring back to FIG. 87, another option provided by the main menu 348 is a review outcomes 354 option, which provides a screen like the one shown in FIG. 93 with information as to the various user outcomes, based on various pre-determined categories. For instance, information as to the percent of compliant subscribers who had an emergency room ("ER") visit 420 is shown. This information may be compared against ER visits made by non-compliant subscribers 422 and control group users who have not subscribed to the system 424.

10 Referring back to FIG. 87, the main menu 348 also provides for a utilization review 356 option. As shown in FIG. 94, upon making this selection, a screen appears with information including the name of the group or facility using the system, this group or facility's specialty 432, the number of cases to date 434, the percentage of cases referred to the system 436, and how this percentage compares 438 to the targeted utilization percentage 440.

15 Upon selection of a particular group or facility 442, the same type of information for the doctors within the selected group or facility 442 may be obtained, as shown in FIG. 95.

The main menu 348 in FIG. 87 further provides a communicate 358 option leading to FIG. 96. The health plan payor may send an audio e-mail 456, text e-mail 458, or fax 460 to the case advisor 450, responsible physician 452, or subscriber 454 as shown here.

20 In this way, the system provides an on-going loop of compliance monitoring and feedback to help the user make difficult lifestyle changes. Once the user has achieved the desired goals, he or she can continue to use the system as a health maintenance or wellness program. An aim of the system is to educate and motivate users to take control of their lives and improve their health by modifying their behavior and changing their lifestyles.

25 FIG. 97 is a block diagram of the present system. It will be apparent to those skilled in the art that the invention described herein may be implemented on various platforms. In a preferred embodiment, however, users, physicians, case advisors, and health plan payors have access to a PC 500 with a Pentium microprocessor. The PC 500 contains audio and CD-ROM 502 capabilities. However, a PC 500 may have other multimedia capabilities including video display and capture capabilities, microphones, etc. The PC 500 is further connected to a printer 504 for generating hard copies of any data accessible by the computer.

30 In a preferred embodiment, the operating system utilized by the PC 500 is a windows-based operating system, preferably Windows 98. Each PC 500 is electronically linked to network server 508 via the Internet 518. Contained in each server 508 is a transaction server 510, meeting server 512, "inner circle" server 514, and "outer circle" server 516. The transaction server 510 is utilized to handle secure purchases via the store 78 (FIG. 46) or travel agency (FIG. 71) interfaces.

1 The secure meeting server 512 is dedicated to implementing the meeting room 96 and
coffee shop functionality discussed in reference to FIGS. 23, 24, and 46. The secure "inner
circle" server 514 is dedicated to handle sensitive data, such as medical records.

5 Other servers may be added as needed. For instance, there may be a separate media
server to handle the audio and video functionality of the system.

 In an alternative embodiment, the system comprises a content server, a data server, and
a chat server. The content server manages all data and information provided by the system
except for information pertaining to individuals utilizing the system. The data server manages
10 data of all individuals utilizing the system. The chat server manages electronic meetings and
Coffee Shop meetings.

 Communication via the Internet 518 is achieved in the preferred embodiment of the
invention through telephone lines by means of a high-speed modem 506 connected to the PC
500. Alternatively, satellites, television cable systems, and ISDN lines may be utilized to access
15 the Internet 518. Standard TCP/IP is utilized as the protocol to communicate between the servers
508 and a PC 500 via the Internet 518.

 The network server 508 may be located at a health plan payor facility with an independent
third party that acts as an Internet Service Provider or elsewhere. The servers 510-516 have
access to one or more relational databases 522 (such as SQL) that contain all the health plan data,
20 including information input to the journal and schedule book information. For example,
pertinent information from a user's journal will be uploaded to the server and downloaded to the
physician and case advisor. Information provided by the physician will also be uploaded to the
same server. System data will be downloaded to the case advisor on a periodic basis for review.

 All the information needed by a user of the system is located in the databases 522 or on
25 CD-ROM and/or DVD distributed to the users on a periodic basis, or, as technology permits, via
streaming audio and video. For instance, in the presently preferred embodiment, the video and
audio clips available to a chairperson 114 for conducting meetings (FIG. 23), or for the kitchen
(FIGS. 56-60), gym (FIGS. 36-39, 26), tranquility park (FIGS. 40-43, 29), and library (FIG. 32)
30 interfaces is located on CD-ROM or DVD. However, with the emergence of ISDN, cable
modem, XDSL, and direct satellite delivery, it is anticipated that the system will be capable of
sending streaming video and audio over the network.

 There are three levels of security implementation to help achieve secure transmission of
data to and from the servers 510-516, as well as to ensure that only authorized users may access
the databases 522. User security for users, physicians/case advisors, and health plan payors is
35 assured by a two tier (user id and password) system. An example of such log-on screen is shown
in FIG. 73.

1 Furthermore, a "cookie"-based code is used to monitor when users log in and out, and
to keep track of how each user uses the system. This will, for example, allow the system to keep
attendance at group meetings. If a user has missed a group meeting, the case advisor would then
5 be able to follow up with him or her about the absence.

Referring back to FIG. 97, a firewall 520 is also provided at the server level to protect
confidentiality of health plan data. Furthermore, encryption is furnished to ensure that
communication between servers 510-516 and PCs 500 is secure.

10 A network administrator 524, who may be the case administrator or an independent third
party, is also attached to the server 508. As described above, the network administrator
subscribes all users to the system except for clinical or wellness group participants. Physicians
or case advisors are responsible for subscribing clinical or wellness members. The network
administrator is also in charge of maintaining the system's databases 522.

15 In the preferred embodiment, the system is constructed using Java servlets in conjunction
with Java Database Connectivity (JDBC), the Oracle Relational Database Management System
(RDBMS), Common Object Request Broker Architecture (CORBA), HTML, Dynamic HTML
(DHTML), and Macromedia Flash. In an alternate embodiment, the system is constructed using
Cold Fusion 4.0 in conjunction with SQL 6.5, Visual Basic, Javascript, Macromedia Flash 3.0,
Active X, HTML, and Dynamic HTML (DHTML).

20 It will be understood that the foregoing is merely illustrative of the principles of the
invention, and that various modifications can be made by those skilled in the art without
departing from the spirit and scope of the invention as defined by the following claims. For
example, the system can be programmed in any number of programming languages to achieve
the underlying principles of the present invention. The screens can be reformatted to change their
25 appearance, and many different data sets can be used for various users with different chronic
diseases or other needs.

CLAIMS:

1. A computer-based personal portal integrated with a behavior modification program, the behavior modification program having a series of milestones and being personalized to the needs of an individual user, the personal portal comprising:

means for customizing access to Internet sites and other sources of information, services, and resources which suit the individual interests of the user;

means for providing tools and educational materials germane to the user's personalized behavior modification program;

means for prompting compliance data from the user, the compliance data being used for monitoring user progress toward achievement of the milestones; and

means for providing feedback to the user based on the compliance data, the feedback for re-enforcing positive behavior and discouraging negative behavior.

2. The personal portal of claim 1 further comprising:

means for updating information presented to the user; and

display prompts for motivating the user to use the tools and educational materials germane to the behavior modification program.

3. The personal portal of claim 1, wherein the means for providing feedback to the user further comprises means for displaying articles and resources for aiding achievement of the milestones, the articles and resources displayed being based on the user progress toward the milestones.

4. The personal portal of claim 3, wherein the resources comprise advertisement of products for aiding achievement of the milestones, as well as the means to purchase such products via e-commerce.

5. The personal portal of claim 2, wherein the means for updating information comprises a smart agent for finding information on the Internet relevant to the behavior modification program.

6. The personal portal of claim 1 further comprising means for integrating third party software for addressing core needs of the user.

1 7. The personal portal of claim 6, wherein the third party software provides personal effectiveness training.

5 8. A computer-based behavior modification program, compliance monitoring and feedback system comprising:

 means for providing a behavior modification program having a series of milestones for a user;

 means for inputting user data at prescribed times;

10 means for correlating the data using a microprocessor with the milestones in the behavior modification program to determine whether the user is complying with the program;

 means for grouping particular data using the microprocessor and linking the particular data to a remote computer; and

15 a personal portal integrated with the behavior modification program for encouraging use of the system on a regular basis, the portal providing customizable access to Internet sites and other sources of information which suit the individual interests of the user, and further providing access to tools and educational material germane to the user's personalized behavior modification program.

20 9. The system of claim 8, wherein the personal portal further comprises:

 means for automatically identifying the user's behavior modification program; and

 means for automatically providing access to Internet sites and other sources of information germane to the identified behavior modification program.

25 10. The system of claim 8, wherein the personal portal further comprises:

 means for updating information presented to the user; and

 display prompts for motivating the user to use the tools and educational materials germane to the behavior modification program.

30 11. The system of claim 10, wherein the means for updating information comprises a smart agent for finding information on the Internet relevant to the behavior modification program.

35 12. The system of claim 8 further comprising means for integrating third party software for addressing core needs of the user.

1 13. The system of claim 12, wherein the third party software provides personal effectiveness training.

5 14. The system of claim 8, wherein the personal portal comprises:
 means for monitoring user progress toward achievement of program milestones; and
 means for displaying articles and resources for aiding achievement of the milestones, the
articles and resources displayed being based on the user progress toward the milestones.

10 15. The system of claim 8 further comprising means for promoting compliance with
the program, the means for promoting compliance including a plurality of graphical screens
configured to entertain and engage the user while providing the user with information pertinent
to the program.

15 16. The system of claim 15, wherein the graphical screens comprise a virtual character
for providing instructions to the user pertinent to the program.

20 17. The system of claim 15, wherein the means for promoting compliance further
comprises means for presenting the user with feedback data reflecting user progress toward
program milestones.

 18. The system of claim 15 wherein the means for promoting compliance further
comprises means for rewarding the user for complying with the behavior modification program.

25 19. The system of claim 15, wherein the means for promoting compliance further
comprises:
 means for promoting modification of the user's diet;
 means for promoting exercise;
 means for promoting stress management; and
30 means for providing a support mechanism during participation in the behavior
modification program.

 20. The system of claim 19, wherein the means for promoting modification of the
user's diet comprises means for electronically educating the user on topics germane to food and
35 diet.

1 21. The system of claim 19, wherein the means for promoting modification of the user's diet comprises means coupled to a food and ingredients database for automatically calculating calories and other nutritional aspects of food consumed by the user.

5 22. The system of claim 19, wherein the means for promoting modification of the user's diet comprises means coupled to a recipe database for recommending recipes to the user based on the behavior modification program.

10 23. The system of claim 19, wherein the means for promoting modification of the user's diet comprises means coupled to a restaurant and food-delivery database for recommending restaurants and food-delivery services in the user's geographical area.

15 24. The system of claim 23 further comprising means for electronically placing an order to the recommended restaurant.

 25. The system of claim 19, wherein the means for promoting exercise comprises means for electronically educating the user on exercise related topics.

20 26. The system of claim 19, wherein the means for promoting exercise comprises a means for presenting an animated demonstration of an exercise, the exercise being part of the user's behavior modification program.

25 27. The system of claim 19, wherein the means for promoting stress management comprises means for electronically educating the user on topics germane to stress management.

 28. The system of claim 19, wherein the means for promoting stress management comprises means for electronically providing a stress management session for aiding the user identify and reduce stress.

30 29. The system of claim 19, wherein the means for promoting stress management comprises means for electronically guiding the user through a relaxation exercise.

35 30. The system of claim 19, wherein the means for providing a support mechanism comprises means for electronically linking the user to a plurality of other users having related behavior modification programs.

1 31. The system of claim 19, wherein the means for providing a support mechanism
comprises means for providing an on-line group meeting based on the behavior modification
program.

5 32. The system of claim 31, wherein the means for providing the on-line group
meeting further comprises means for expressing emotion during participation in the meeting.

10 33. The system of claim 19, wherein the means for providing a support mechanism
comprises means for providing an electronic mentoring area for mentoring and providing support
to the user.

15 34. The system of claim 19, wherein the means for providing a support mechanism
comprises electronic bulletin-board means for posting messages and reading messages to and
from other users having related behavior modification programs.

 35. The system of claim 19, wherein the means for providing a support mechanism
comprises:

20 means for providing a search criteria for finding an individual who matches the search
criteria;

 means for searching a membership database for the individual; and

 means for providing contact information of the individual matching the search criteria.

25 36. The system of claim 8 further comprising an electronic journal for allowing input
and integrated display of program-related information and non-program related information
pertaining to the user's personal schedule, the program-related information being available to a
health advisor for monitoring user compliance and providing feedback to the user about the user
compliance.

30 37. The system of claim 8 further comprising computer-implemented means for
preventing unauthorized access to the system.

 38. The system of claim 8 further comprising computer-implemented means for
administrating system access and system contents.

35 39. A computer-based goal oriented program, compliance monitoring and feedback
system comprising:

1 means for providing a series of program goals for a user;
means for inputting user data at prescribed times;
means for correlating the data using a microprocessor with the goals in the program to
5 determine whether the user is taking actions for meeting the goals;
means for grouping particular data using the microprocessor and linking the particular
data to a remote computer; and
a personal portal integrated with the program for encouraging use of the system on a
regular basis, the portal providing customizable access to Internet sites and other sources of
10 information, services, and resources which suit the individual interests of the user, and further
providing access to tools and educational material germane to the user's personalized program.

40. The system of claim 39, wherein the personal portal further comprises:
means for automatically identifying the user's program; and
15 means for automatically providing access to Internet sites and other sources of
information germane to the identified program.

41. The system of claim 39, wherein the personal portal further comprises:
means for updating information presented to the user; and
20 display prompts for motivating the user to use the tools and educational materials
germane to the user's program.

42. The system of claim 41, wherein the means for updating information comprises
a smart agent for finding information on the Internet relevant to the behavior modification
25 program.

43. The system of claim 39 further comprising means for integrating third party
software for addressing core needs of the user.

30 44. The system of claim 43, wherein the third party software provides personal
effectiveness training.

45. The system of claim 39, wherein the personal portal comprises:
means for monitoring user progress toward achievement of the goals; and
35 means for displaying articles and resources for aiding achievement of the goals, the
articles and resources displayed being based on user progress toward the goals.

1 46. The system of claim 39 further comprising means for promoting compliance with
the program, the means for promoting compliance comprising a plurality of graphical screens
5 having means for entertaining and engaging the user while providing the user with information
pertinent to the program.

 47. The system of claim 46, wherein the graphical screens comprise a flash animation
character for providing instructions to the user pertinent to the program.

10 48. The system of claim 46, wherein the means for promoting compliance further
comprises means for presenting the user with feedback data reflecting user progress toward the
goals.

 49. A method for assisting an individual to comply with a therapeutic behavior
15 modification program, the method comprising the steps of:

 providing a behavior modification program having a series of milestones for a user;

 inputting user data at prescribed times;

 correlating the data using a microprocessor with the milestones in the behavior
modification program to determine whether the user is complying with the program;

20 grouping particular data using the microprocessor and linking the particular data to a
remote computer; and

 encouraging use of the system on a regular basis via a personal portal, the portal
providing customizable access to Internet sites and other sources of information which suit the
individual interests of the user, and further providing access to tools and educational material
germane to the user's personalized behavior modification program.
25

 50. The method of claim 49 further comprising the steps of:

 automatically identifying the user's behavior modification program via the personal
portal; and

30 automatically providing access to Internet sites and other sources of information germane
to the identified behavior modification program via the personal portal.

 51. The method of claim 49, wherein the step of encouraging use of the system on
a regular basis comprises:

 updating information presented to the user on the personal portal; and

35 presenting display prompts on the personal portal for motivating the user to use the tools
and educational materials germane to the behavior modification program.

1

52. The method of claim 51, wherein the step of updating information comprises finding information on the Internet relevant to the behavior modification program.

5

53. The method of claim 49 further comprising the step of integrating third party software for addressing core needs of the user.

10

54. The method of claim 53, wherein the third party software provides personal effectiveness training.

15

55. The method of claim 49 further comprising the steps of:
monitoring user progress toward achievement of program milestones via the personal portal; and
displaying articles, services, and resources via the personal portal for aiding achievement of the milestones, the articles, services, and resources displayed being based on the user progress toward the milestones.

20

56. The method of claim 49 further comprising the step of promoting compliance with the program by displaying a plurality of graphical screens configured to entertain the user while providing the user with information pertinent to the program.

25

57. The method of claim 56, wherein the graphical screens comprise a virtual character for providing instructions to the user pertinent to the program.

30

58. The method of claim 56, wherein the step of promoting compliance with the program further comprises the step of presenting the user with data reflecting user progress toward program milestones.

59. The method of claim 56, wherein the step of promoting compliance with the program further comprises the step of rewarding the user for complying with the behavior modification program.

35

60. The method of claim 56, wherein the step of promoting compliance with the program further comprises the steps of:
promoting modification of the user's diet;
promoting user exercise;
promoting stress management; and

1 providing a support mechanism during participation in the behavior modification program.

5 61. The method of claim 60, wherein the step of promoting modification of the user's diet comprises the step of electronically educating the user on topics germane to food and diet.

62. The method of claim 60, wherein the step of promoting modification of the user's diet comprises the steps of:

10 displaying a food diary to the user, the food diary being configured to accept user input about a food consumed by the user;

automatically calculating the calories and other nutritional aspects of the consumed food; and

displaying the calorie and nutritional information of the consumed food to the user.

15 63. The method of claim 60, wherein the step of promoting modification of the user's diet comprises the steps of:

searching a recipe database for a recipe conforming with the behavior modification program; and

20 displaying the recipe to the user as a recommended recipe.

64. The method of claim 60, wherein the step of promoting modification of the user's diet comprises the steps of:

25 searching a restaurant and food-delivery database for a food establishment in the user's geographical area matching user search parameters; and

displaying information on a matched food establishment to the user.

30 65. The method of claim 64 further comprising the step of electronically placing an order to the matched food establishment.

66. The method of claim 60, wherein the step of promoting user exercise comprises the step of electronically educating the user on exercise related topics.

35 67. The method of claim 60, wherein the step of promoting user exercise comprises the step of presenting an animated demonstration of an exercise, the exercise being part of the user's behavior modification program.

1 68. The method of claim 60, wherein the step of promoting stress management comprises the step of electronically educating the user on topics germane to stress management.

5 69. The method of claim 60, wherein the step of promoting stress management comprises the step of electronically providing a stress management session for aiding the user identify and reduce stress.

10 70. The method of claim 60, wherein the step of promoting stress management comprises the step of electronically guiding the user through a relaxation exercise.

15 71. The method of claim 60, wherein the step of providing a support mechanism comprises the step of electronically linking the user to a plurality of other users having related behavior modification programs.

20 72. The method of claim 60, wherein the step of providing a support mechanism comprises the step of providing an on-line group meeting based on the behavior modification program.

25 73. The method of claim 72, wherein the step of providing the on-line group meeting further comprises the step of visually depicting an emotion of the user during participation in the meeting.

30 74. The method of claim 60, wherein the step of providing a support mechanism comprises the step of providing an electronic mentoring area for mentoring and providing support to the user.

35 75. The method of claim 60, wherein the step of providing a support mechanism comprises the step of providing an electronic bulletin-board for posting messages and reading messages to and from other users having related behavior modification programs.

 76. The method of claim 60, wherein the step of providing a support mechanism comprises:
providing a search criteria for finding an individual who matches the search criteria;
searching a membership database for the individual; and
providing contact information of the individual matching the search criteria.

1 77. The method of claim 49 further comprising the steps of:
displaying an electronic journal to the user;
receiving user input of information relating to user compliance with the behavior
5 modification program through the electronic journal;
correlating user input with the milestones in the behavior modification program;
providing the correlated information to a case advisor for monitoring user compliance and
providing feedback to the user about the user compliance; and
10 displaying the correlated information on the electronic journal.

FIG. 1

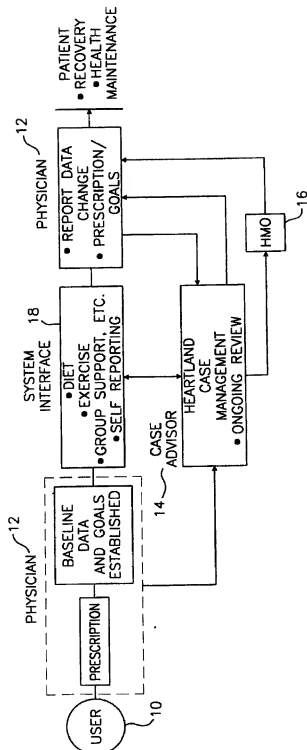


Fig. 2

2002-2002

Administration Content Health Advisor Data Analysis

User Search View All Users Add New User

Search For User

SalusID

Last Name

SSN

Search ☒

Fred Smith
(184)

Personal Contact Information

Please note that all fields noted with an asterisk are required.

User I. D. *

User Password *

First Name *

Middle Initial

Last Name *

Mother's Maiden Name

Sex *

Date of Birth * (0 = 000000)

Social Security # *

Home Address 1 *

Home Address 2

City *

State *

Zip *

Home Phone *

Salus Only

Personal
Medical
Medication
Surgery
Additional Medical
Dietary & Exercise
Alcohol Consumption
Stress
Family, Social, Religious
Sexuality
Goal

SUBSTITUTE SHEET (RULE26)

Fig. 3

2002
2006

Search For User

Search ID

Last Name

SSN

Search ☒

Fred Smith
(194)

Medical Profile
194 : Smith, Fred

Please note that all fields indicated by an asterisk must be filled out.

Height * inches

Goal Weight lbs

Waist * inches

Waist to Hip Ratio

Body Mass Index (BMI) BMI

Resting Heart Rate * bpm

Blood Pressure * systolic / diastolic

Blood Type

If other, please specify

Are you a smoker? *

Glucose (Via finger stick after fasting for 12 hours) *

Lipid Profile (Via finger stick after fasting for 12 hours)

Cholesterol - HDL * Cholesterol - LDL * Ratio to 1

Total Cholesterol * Triglycerides *

Sexuality

Goal

Status Only

Administration

View All Users

Add New User

Current Weight * lbs

Body Fat * %

Hip * inches

SUBSTITUTE SHEET (RULE26)

Fig. 4

Fig. 4

Administration **Content** **Health Advisor** **Data Analysis**

User Search **View All Users** **Add New User**

Additional Medical Information : Medication

184 : Smith, Fred

Search For User

SalusID

Last Name

SSN

Search

Fred Smith (184)

Information

Personal ☐

Medical ☐

Medical Contact ☐

Medication ☐

Surgery ☐

Additional Medical ☐

Dietary & Exercise ☐

Alcohol Consumption ☐

Stress ☐

Family, Social, Religious ☐

Sexuality ☐

Goal ☐

Salus Only ☐

Medication

Medication Name **Nonvasc**

Dosage **10 mg**

Prescription number **AH12-67**

Refills **0**

Frequency ☐ Daily ☐ Twice/daily ☐ Three times/daily

OR

☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thr ☐ Fri ☐ Sat

Dosage to

Pharmacy Phone **61 999 9876**

Reminder Service

Pager Carrier **SkyTel**

Pager Number **818 341 8890**

Frequency time **11:00 AM**

Pager Type **AZ**

2006 **2010** **2008**

2006 **2010** **2008**

SUBSTITUTE SHEET (RULE26)

Fig. 5

Administration **Consent** **Health Advisor** **Data Analysis**

User Search View All Users Add New User

Search For User

SalusID

Last Name

SSN

184 : Smith, Fred

Please note that all fields indicated by an asterisk must be filled out.

How interested are you in making lifestyle changes in each of the following areas?

| | Very | Moderately | Somewhat | Not very | Not at all |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Exercise | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Losing weight | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Quitting smoking | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Managing stress | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Changing my diet | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Improving my Relationships with Others | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Managing Alcohol/Drug use | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

2016

2014

2018

Goals

Personal

Medical

Medical Contact

Medication

Surgery

Additional Medical

Dietary & Exercise

Alcohol Consumption

Stress

Family, Social, Religious

Sexuality

Goal

Salus Only

SUBSTITUTE SHEET (RULE26)

Fig. 6

| User Search | | Add New User | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------|---|----------------|----------------------|--------|------|---------|--------|-------------|----------------|----------------|----------|---------------|---------------|---------------|-------|---------------|---------------|---------------|-----|------------|------------|------------|----------------|--------------------|-------------|---------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|
| Administration | Content | Health Advisor | Date Analyzer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Search Fred Smith (184) | | Vital Statistics Please select the items that you would like Fred to track in his journal and how often you would like him to track these statistics. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Information Personal Medical Medical Contact Medication Surgery Additional Medical Dietary & Exercise Alcohol Consumption Stress Family, Social, Religious Sexuality Goal Status Only | | <table border="1"> <thead> <tr> <th>Tracking Start Date:</th> <th>Aug 98</th> <th>1 99</th> <th>1998 99</th> </tr> </thead> <tbody> <tr> <td>Weight</td> <td>Once a week</td> <td>not applicable</td> <td>not applicable</td> </tr> <tr> <td>Body Fat</td> <td>Every 30 days</td> <td>Every 30 days</td> <td>Every 30 days</td> </tr> <tr> <td>Waist</td> <td>Every 30 days</td> <td>Every 30 days</td> <td>Every 30 days</td> </tr> <tr> <td>Hip</td> <td>Once A day</td> <td>Once A day</td> <td>Once A day</td> </tr> <tr> <td>Blood Pressure</td> <td>Resting Heart Rate</td> <td>Cholesterol</td> <td>Glucose</td> </tr> <tr> <td>Every 90 days</td> <td>Every 90 days</td> <td>Every 90 days</td> <td>Every 90 days</td> </tr> <tr> <td>not applicable</td> <td>not applicable</td> <td>not applicable</td> <td>not applicable</td> </tr> </tbody> </table> | | Tracking Start Date: | Aug 98 | 1 99 | 1998 99 | Weight | Once a week | not applicable | not applicable | Body Fat | Every 30 days | Every 30 days | Every 30 days | Waist | Every 30 days | Every 30 days | Every 30 days | Hip | Once A day | Once A day | Once A day | Blood Pressure | Resting Heart Rate | Cholesterol | Glucose | Every 90 days | Every 90 days | Every 90 days | Every 90 days | not applicable | not applicable | not applicable | not applicable |
| Tracking Start Date: | Aug 98 | 1 99 | 1998 99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weight | Once a week | not applicable | not applicable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Body Fat | Every 30 days | Every 30 days | Every 30 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Waist | Every 30 days | Every 30 days | Every 30 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hip | Once A day | Once A day | Once A day | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Pressure | Resting Heart Rate | Cholesterol | Glucose | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Every 90 days | Every 90 days | Every 90 days | Every 90 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| not applicable | not applicable | not applicable | not applicable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vital Statistics Programs View Progress | | 2019 2020 2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SUBSTITUTE SHEET (RULE26)

Fig. 7

| Administration | | Reports | | Health Advisor | | Data Analysis | |
|---------------------------------|-----------|----------------|-------------------------|----------------|-----|---------------|--|
| User Search Information | | View All Users | | Add New User | | | |
| Strength training exercise list | | | | | | | |
| Personal | Abdominal | Abdominal | Biceps Curls | Weight | lbs | 10 | |
| Medical | Abdominal | Abdominal | Biceps Curls w/ weights | Weight | lbs | 10 | |
| Medical Contact | Abdominal | Abdominal | Chair Abdominal Work | Weight | lbs | 10 | |
| Medication | Abdominal | Abdominal | Shoulder Curl-Up | Weight | lbs | 10 | |
| Surgery | Abdominal | Abdominal | Straight Arm Curl-Ups | Weight | lbs | 10 | |
| Additional Medical | Abdominal | Abdominal | Full Curl-Ups | Weight | lbs | 10 | |
| Dietary & Exercise | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Alcohol Consumption | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Stress | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Family, Social, Religious | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Sexuality | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Goal | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Status Only | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Vital Statistics | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Programs | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Exercise | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Nutrition | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Stress Management | Abdominal | Abdominal | | Weight | lbs | 10 | |
| Support Group Meeting | Abdominal | Abdominal | | Weight | lbs | 10 | |
| View Progress | Abdominal | Abdominal | | Weight | lbs | 10 | |

2022-2024

SUBSTITUTE SHEET (RULE26)

Fig. 8

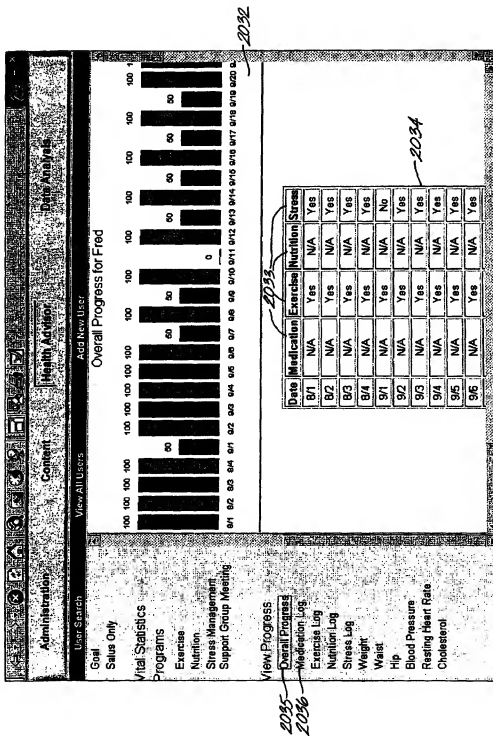
| User Search | | View All Users | | Add New User | |
|-----------------------|---------------------|-----------------|---------------------------|--------------|--------------------|
| Administration | Content | Health Center | Physician | | |
| Personal | Medical | Medical Contact | Medication | Surgery | Additional Medical |
| Dietary & Exercise | Alcohol Consumption | Stress | Family, Social, Religious | Sexuality | Goal |
| Salus Only | Vital Statistics | Programs | Exercise | Nutrition | Stress Management |
| Support Group Meeting | View Progress | | | | |

| Nutrition program : Level 1 | |
|-----------------------------|--------------------------------|
| Please Review and Confirm | |
| Start date | 02/04/99 |
| Goal | Weight Control |
| Calories | 2042 |
| Total Fat | 30% of calories or less |
| Saturated Fat | 68 grams from fat |
| Cholesterol | 22.89 grams from saturated fat |
| Sodium | Less than 300 mg. |
| Fiber | 2400 mg. |
| | 20 - 35 grams |

| Modify | Finish |
|--------|--------|
| 2022 | 2023 |

SUBSTITUTE SHEET (RULE26)

Fig. 9



SUBSTITUTE SHEET (RULE26)

Administration - HeartLand

HeartLand Patients Folders

Navigation: Home, Back, Forward, Search, Print, Help, Logout, User Profile, Settings, Reports, Alerts, News, Announcements, Events, Calendar, Mail, Chat, Forum, Polls, Surveys, Feedback, Helpdesk, Support, Contact Us, About Us, Privacy Policy, Terms of Service, Disclaimer, Copyright, Sitemap, RSS Feeds, Social Media, etc.

Provider/Case Advisor: [Select]

Heart: Click on CATEGORY SEE DETAIL

Click on the subscriber you wish to design a program for:

| Administration | | HeartLand | |
|--------------------------|--------------------------|--------------------------|---------------------------|
| C Cindra 595-11-6953 | P Douglas 202-21-8621 | E Daulton 895-41-3821 | J Evans 874-58-4821 |
| M Hartley 897-57-8725 | T Jones 537-57-1223 | A Krutzer 494-56-1229 | P Lynn 324-58-4388 |
| M Rosa 509-74-8324 | B Smith 888-77-5531 | C Sample 329-47-7814 | Fred Smith 217-48-3947 |
| | | | V William 888-33-4874 |
| | | | F Zachery 598-33-8973 |
| | | | D Nelson 584-85-4273 |
| | | | Sally R 491-64-3771 |
| | | | B Frank 125-47-3025 |
| | | | D Hamill 543-51-4379 |

40

42

View Profile

Fig. 10

Administration Heartland
 Heartland Health Assessment Review

Patient Name: Fred Smith
 Starting Date: 2/11/98
 Heartland I.D.: 23,642
 Height / Sex: 6'9" / Male
 Weight: 183
 BMI: 28.28
 Smokes: 5 Pack/Day
 Physical Activity: 0/0/0 minutes / x-week / RPE 20/12/3
 Alcohol: 2 Average Drinks per Day
 Eating Habits: 40 % Fiber/Complex Carb Intake, 20 % Fatty Food Intake, 20 % Fatty Dairy Intake
 Calories: 3,600, Fat Calories & %: 45%, Cholesterol - LDL: 140, Cholesterol - HDL: 35, Cholesterol: 245 mg/dl, Fasting Triglyceride (mg/dl): 88, Stress: 18.8 Scale of 1 to 10 (10 being high stress), Depression: 10, Blood Pressure: 140/90, Systolic/Diastolic, Smoking Use: 20, Percent of Time, Percent per Month, Prescription Medications: 3, -warfarin: 3.5 mg, 12.5 mg/dl, -losartan: 20 mg, 20 mg/dl

SCREEN 1 OF 3 49
 Now 2/10/98 1 month Goal GOALS

Patient Status & Goals Details

Patient Name: Fred Smith
 Starting Date: 2/11/98
 Heartland I.D.: 23,642
 Height / Sex: 6'9" / Male
 Weight: 183
 BMI: 28.28
 Smokes: 5 Pack/Day
 Physical Activity: 0/0/0 minutes / x-week / RPE 20/12/3
 Alcohol: 2 Average Drinks per Day
 Eating Habits: 40 % Fiber/Complex Carb Intake, 20 % Fatty Food Intake, 20 % Fatty Dairy Intake
 Calories: 3,600, Fat Calories & %: 45%, Cholesterol - LDL: 140, Cholesterol - HDL: 35, Cholesterol: 245 mg/dl, Fasting Triglyceride (mg/dl): 88, Stress: 18.8 Scale of 1 to 10 (10 being high stress), Depression: 10, Blood Pressure: 140/90, Systolic/Diastolic, Smoking Use: 20, Percent of Time, Percent per Month, Prescription Medications: 3, -warfarin: 3.5 mg, 12.5 mg/dl, -losartan: 20 mg, 20 mg/dl

EDIT DESIGN 50

SUBSTITUTE SHEET (RULE26)

Administration — Heartland
Heartland Health Assessment Review

Provider/Case Advisor
Date: 3/10/98
Social Security #: 213-48-3947

SCREEN 2 OF 3

Design a new program for: Fred Smith
Heartland I.D. #: 23-642

INITIAL SCALE

| | LOW | 1 | 2 | 3 | 4 | 5 |
|-------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| DIET | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| EXERCISE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| STRESS MANAGEMENT | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| GROUP SUPPORT | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| DRUGS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| COMPLIANCE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

51

Based on your input, Heartland suggests the following program and goals for: Fred Smith

52

| | 15% | Calories From Fat |
|---------------------------|-----------|-------------------|
| Diet | 3/4 | hr |
| Exercise | 4 | days per week |
| Stress Management | 1/2 | hr |
| Group Support | 7 | days per week |
| Compliance Mgt. Freq. | 5 | hr |
| Smoking | 4 | times per Month |
| 4-epin | Cessation | |
| Drug -hydrochlorothiazide | 325 | mg/da |
| -Lorazepam | 12.5 | |
| | 20 | |

Program Details

54

Eg. 12

SUBSTITUTE SHEET (RULE26)

Administration - HeartLand
HeartLand Health Assessment Review

MC PF Payor/Employer Provider/Case
Provider/Case Advisor

HEALTH MENU
HMC: CLICK ON CATEGORY SEE DETAIL

SCREEN 3 OF 3

Based on your Input, here is HeartLand's recommended program for: Fred Smith
Use the buttons to confirm or edit this program.

61

| PATIENT STATUS & GOALS: DETAILS | Now 2/16/99 | 1 month Goal | GOALS |
|---------------------------------|-------------------|--------------|---------------------|
| Name / D.O.B. | Fred Smith 7-5-49 | | |
| Starting Date | 2/1/99 | | |
| Heartland I.D. | 25-442 | | |
| Height / Sex | 6'3" Male | | |
| Weight | 193 | | |
| BMI | 28.28 | 182 | 175 170 |
| Smokes | | 28.28 | 25.94 25.00 |
| Physical Activity | 5 | 20 7 12 | 25 14 4 1 18 |
| Alcohol | 2 | 2 | 1 1 |
| Eating Habits | 40 | 40 | 70 80 |
| | 40 | 20 | 15 |
| | 40 | 50 | 5 |
| Calories | 3,600 | 3,300 | 3,100 2,900 2,800 |
| Fat Calories & % | 45% | 44% | 39% 39% |
| Cholesterol - LDL | 142 | 140 mg/dl | 135 mg/dl 130 mg/dl |
| Cholesterol - HDL | 35 | 37 mg/dl | 38 mg/dl 45 mg/dl |
| Cholesterol | 248 | 228 | 210 190 |
| Reading Pulse Rate | 88 | 88 | 85 79 |
| Stress | 8.2 | 7.0 | 6.0 5.5 |
| Depression | 140/100 | 110 | 5 0 |
| Blood Pressure | 140/100 | 140/100 | 130/90 130/80 |
| Sedent Use | 30 | 60 | 75 190 |
| Back Pain | | | |
| Incidents per month | | 3 | 2 0 |
| Pharmaceuticals | | | |
| - Aspirin | 325 mg | 325 mg | 325 mg 325 mg |
| - Ibuprofen | 12.5 mg | 12.5 mg | 0 mg 0 mg |
| - Lisinopril | 20 mg | 20 mg | 20 mg 0 mg |

65
64
60

CONFIRM
EDIT
OPTIONS

Fig. 13

SUBSTITUTE SHEET (RULE26)

22-

HeartLand Prescription Form

| | | | | |
|------------------------|-----------------------|------|----------------|--------------|
| Patient Name <u>23</u> | Patient ID <u>123</u> | Date | Physician Name | Physician ID |
|------------------------|-----------------------|------|----------------|--------------|

1. Fill in diagnosis:

| | |
|-------------------|---------------------|
| Patient Diagnosis | Co-morbid Diagnosis |
|-------------------|---------------------|

2. Circle a diagnostic category:

24-

| Category | Diagnosis | Level 1 (mos.) | Level 2 (mos.) | Level 3 (mos.) | Health and Wellness |
|----------|---|----------------|----------------|----------------|---------------------|
| I | Current year MI survivor | 3 | 3 | 6 | Contin.>12th month |
| II | Current year alt. to PTCA or CABG | 3 | 3 | 6 | Contin.>12th month |
| III | Current year diagnosed CAD | 3 | 3 | 6 | Contin.>12th month |
| IV | All diagnosed Angina | 3 | 3 | 6 | Contin.>12th month |
| V | Prior year's post MI/surgical-High Risk | 3 | 3 | 6 | Contin.>12th month |
| VI | Prior year's post MI/surgical-Low Risk | 1 | 1 | 10 | Contin.>12th month |
| VII | 2 or more Risk factors | 0 | 2 | 4 | Contin.>6th month |
| VIII | Health and Wellness | 0 | 0 | 0 | Continuous |

30

3. Please circle as appropriate:

| | | |
|--|-----|----|
| Does the patient need smoking cessation? | Yes | No |
| Have you prescribed nicotine patch or gum? | Yes | No |
| Does the patient need weight reduction? | Yes | No |

If yes, target weight: _____

32-

4. What are patient's current and prescribed medications?

| Medication | Standard Dosage | Comments/Changes |
|-----------------------------|-----------------|------------------|
| HCTZ | 25 mg | |
| Atenolol | 50 mg | |
| Lisinopril | 20 mg | |
| Atorvastatin | 20 mg | |
| Loxastatin | 20 mg | |
| Aspirin/Aspirin + Vitamin E | 400 IU | |
| Aspirin/Aspirin + Vitamin C | 500 mg | |
| Other: | | |
| Other: | | |
| Other: | | |

34-

5. Circle or fill in desired 3-month targets:

| | 1200 | 1500 | 2000 | 2500 | 3000 |
|------------------------|----------|---------|----------|---------|-----------|
| Daily calories | | | | | |
| Sat Fat Grams | <15 | 15 | 18 | 20 | 25 |
| Pot Fat Cal | 10% | 15% | 20% | 25% | 30% |
| Exercise (days/week) | 20/5x/3 | 30/5x/4 | 45/5x/5 | 50/5x/6 | 60/5x/7 |
| Max Heart Rate | | | | | |
| Stress Reduction Needs | Low Need | Some | Definite | High | Very High |
| Lipid Level Target | | | | | |
| Total Cholesterol | 140 | 150 | 175 | 200 | <225 |
| LDL | 60 | 70 | 80 | <100 | <125 |
| HDL | 35 | 37 | 39 | 41 | >42 |

Physician's Signature: _____

Telephone: _____

FAX THIS FORM TO SALUS MEDIA: (805) 969-3601

You will receive Fax confirmation within 24 Hours. For Assistance please call: (805) 969-2234

Fig. 1A

SUBSTITUTE SHEET (RULE26)

70
HeartLand Patient Progress Report

Date: April 2, 1997

Dear Doctor Cavell:

This is a status report on your patient, Fred Smith. SSN: 565-76-2334, Plan No. 811-866754

Your diagnosis was: non-complicated anterior MI and co-morbid diagnosis none.

Patient entered the HeartLand program on March 12, 1997. He/she has been on the program 3 weeks.

Progress toward goals:

| Parameter | Current Status | Suggested Next steps | Target |
|-------------------|-----------------------|-----------------------|-----------------------|
| Blood Pressure | 146/92 | 144/90 | 140/90 |
| Weight | 172 | 170 | 170 |
| Resting Pulse | 67 | 65 | 65 |
| Exercise Program | 35 min/4x-wk/4 RPE | 45 min/4x-wk/5 RPE | 45 min/4x-wk/6 RPE |
| Total Cholesterol | 210 mg/dl | 200 mg/dl | 190 mg/dl |
| LDL Cholesterol | 125mg/dl | 115mg/dl | 100mg/dl |
| HDL Cholesterol | 39mg/dl | 42mg/dl | 45mg/dl |
| Diet: Cal/May | 3100 | 3000 | 2800 |
| Salt: gram/day | 20 g | 15 g | 10 g |
| Smoking Status | 0 wks - 5 pack/day | 0 | 0 |
| Aspirin | 325 mg - missed 1/wk | 325 mg - missed 0/wk | 325 mg - missed 0/wk |
| El CIZACIN | 12.5 mg - missed 0/wk | 1205 mg - missed 0/wk | 12.5 mg - missed 0/wk |
| Ticlid | 20 mg - missed 0/wk | 20 mg - missed 0/wk | 20 mg - missed 0/wk |
| Other | | | |
| Other | | | |

Please initial here to indicate you have reviewed this Status Report: _____

Please initial here to indicate you agree with suggested next step targets: _____

Indicate any changes desired in Next Step Goals and Medications: _____

Physician's Signature: _____

Thank you,

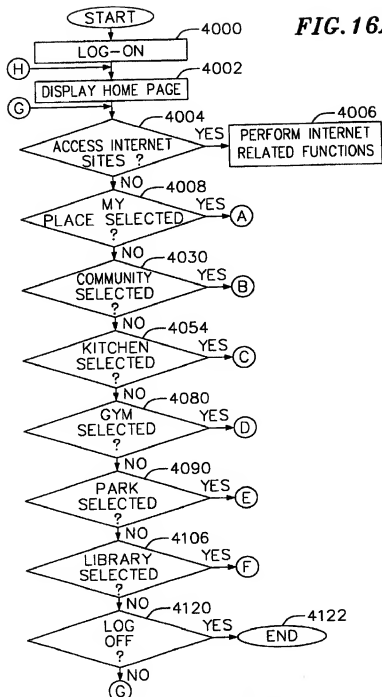
Mary Quinn
HeartLand Case Advisor

FAX THIS FORM TO SALUS MEDIA: FAX NO. (805) 949-3601
You will receive Fax confirmation within 24 Hours. For Assistance please call (805) 949-2234

Fig. 15

SUBSTITUTE SHEET (RULE26)

FIG. 16A



SUBSTITUTE SHEET (RULE26)

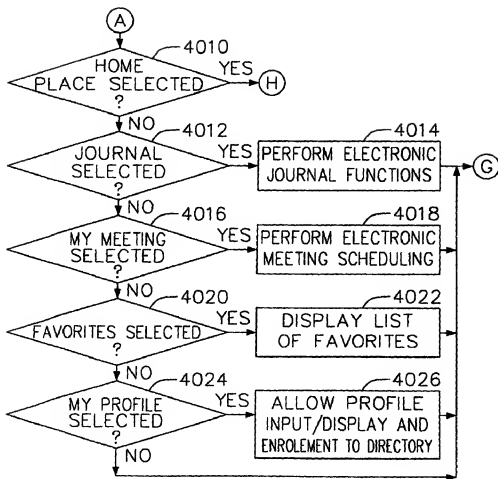
FIG. 16B**SUBSTITUTE SHEET (RULE26)**

FIG. 16C

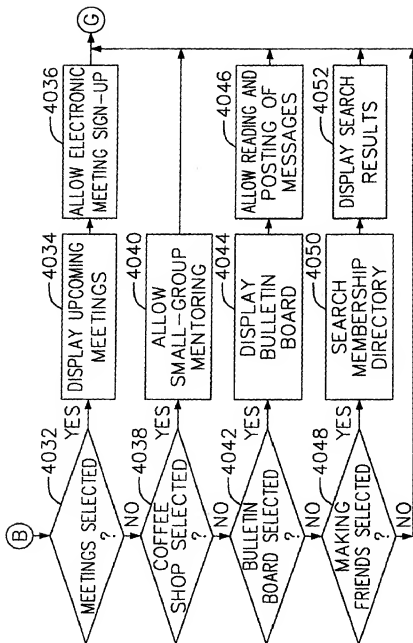


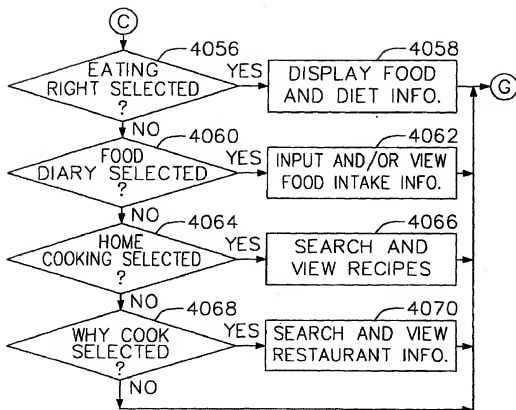
FIG. 16D**SUBSTITUTE SHEET (RULE26)**

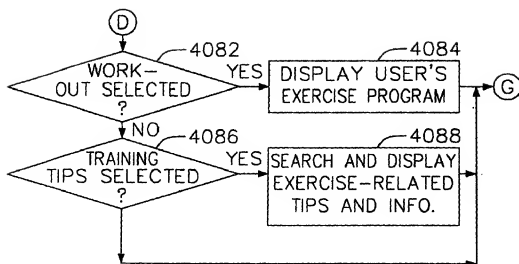
FIG. 16E**SUBSTITUTE SHEET (RULE26)**

FIG. 16F

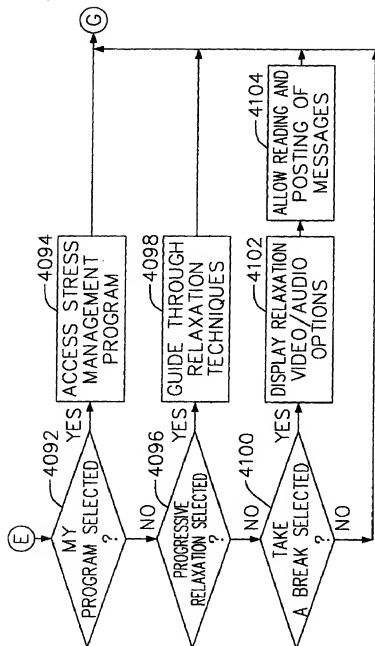


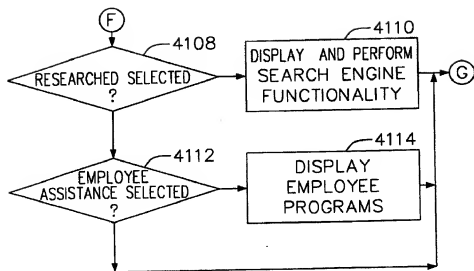
FIG. 16G



Fig. 19

GTE Lifesyles

my place my meeting my exercise my goals

Lifestyles today Journal

Fred's Program Log

You already filled out your program log for today.
Would you like to update the log? Thanks for
keeping your log up to date.

2138

Feb 24 5 2 1995

Did you...

Take your medication?

Follow your exercise program?

Follow your nutrition program?

Follow your stress program?

What's your Blood Pressure?

Yes No

☐ ☐

☐ ☐

☐ ☐

☐ ☐

Syst / Diast

125 85

submit

2132

Fred's Progress Log

You just got 4 points.

Total reward points to date are 412.

2134

Overall Progress

100 100 100 100 100 100 100 100 100 100

2136

75

50

75

128 128 128 128 128 128 128 128 128 128

20 20 20 20 20 20 20 20 20 20

24 24 24 24 24 24 24 24 24 24

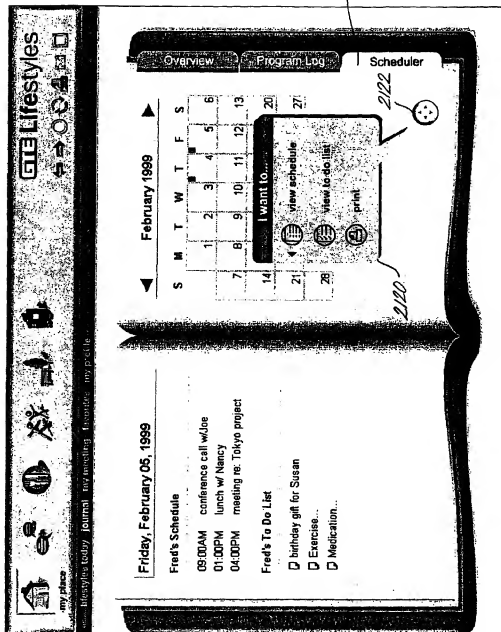
daily

weekly

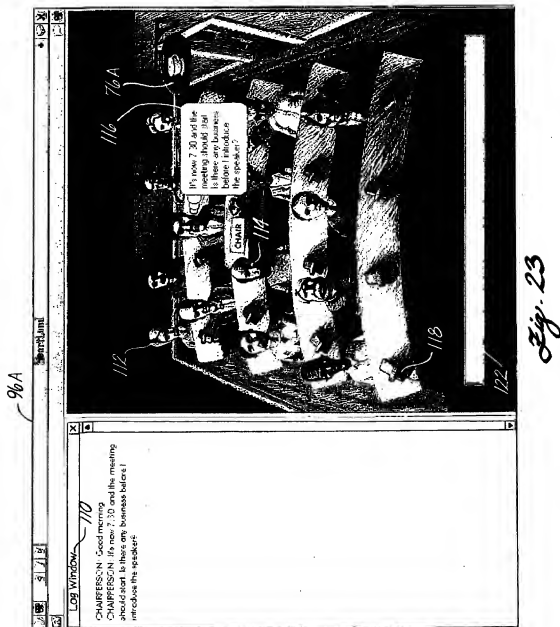
monthly

SUBSTITUTE SHEET (RULE26)

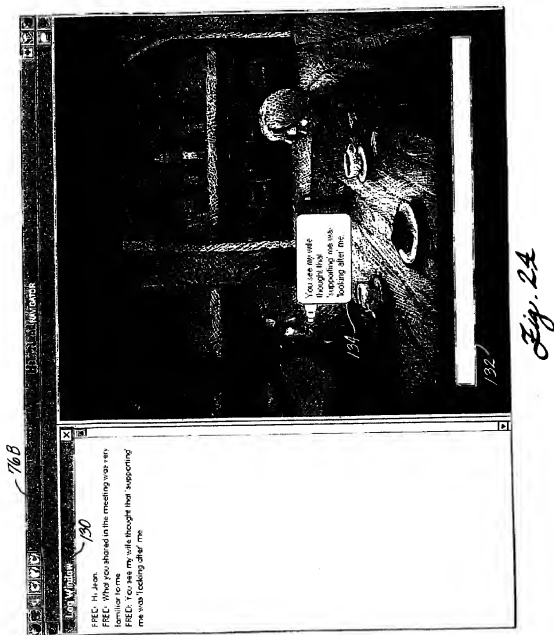
Fig. 21



SUBSTITUTE SHEET (RULE26)



SUBSTITUTE SHEET (RULE26)



SUBSTITUTE SHEET (RULE26)

Fig. 25

3028

my place my family my health my lifestyle my goals my progress my feedback

my place **my family** **my health** **my lifestyle** **my goals** **my progress** **my feedback**

Personal Profile **Medical Profile** **Membership Directory**

The Lifestyle Membership Directory helps program members find other members with similar goals and interests. Please select the information you would like to include in your profile.

To be listed in the directory, please fill out the following profile information: **2030**

☐ Member Name ☐ Sex ☐ City ☐ State

☐ Real Name ☐ Email

☐ **Lifestyle Goals** **2032**

☐ Stress reduction ☐ Nutrition

☐ Weight loss ☐ Stop Smoking

☐ Exercise

☐ **Occupation** **2034**

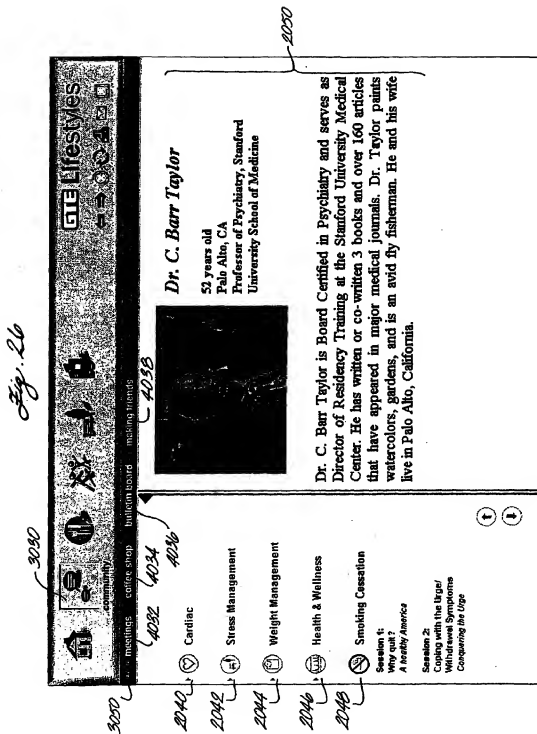
☐ **Hobbies & Interests** **2036**

☐ Sports ☐ Art/Museum

☐ Movies ☐ Outdoors

submit

3026



SUBSTITUTE SHEET (RULE26)

Fig. 27

3030

2000

4032 4034 4036

4038

4050

meetings bulletin board making friends

Great Lifesyles

Maryann Littenberg

74 years old
Los Angeles, CA
Former School Teacher

After a heart attack in 1991, Maryann Littenberg has made tremendous strides in changing her lifestyle. She taught middle school in Los Angeles for 29 years and continues her involvement with children through the Great Books Program, designed to inspire a love of reading at an early age. Now retired, Maryann enjoys traveling abroad, particularly to France, which she calls her "second home."

Session 1:
Importance of lifestyle changes
Completing the circle

Session 2:
Benefits of group support
Step-by-step

Session 3:
Emotional reactions to heart disease
Closely thinking

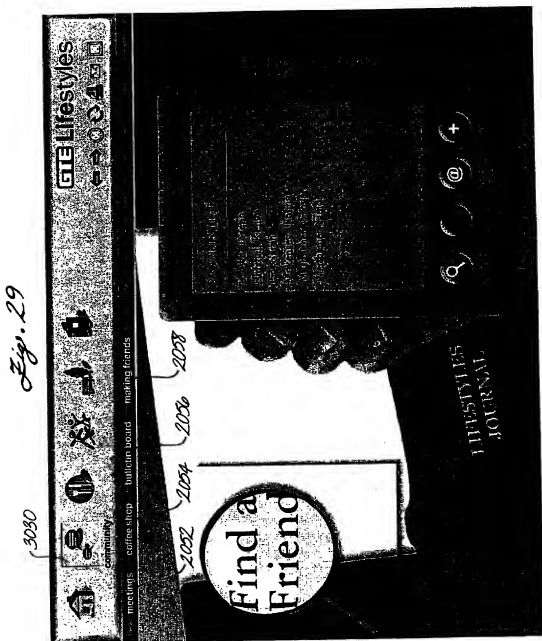
Session 4:
Independence/Autonomy

Session 5:
Lifestyles issues: diet
The main dish

Session 6:
Lifestyles issues: exercise
The motivation

Exercise 7:

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SUBSTITUTE SHEET (RULE26)

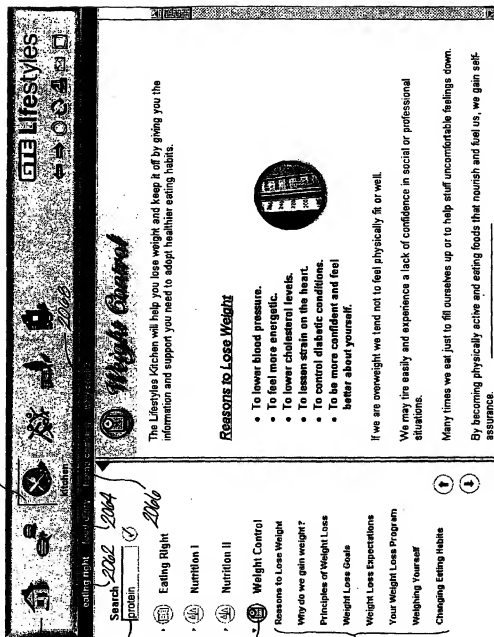
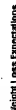
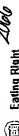
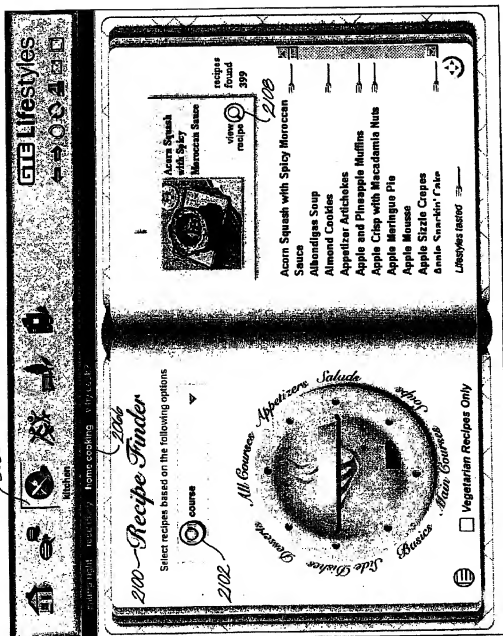


Fig. 32

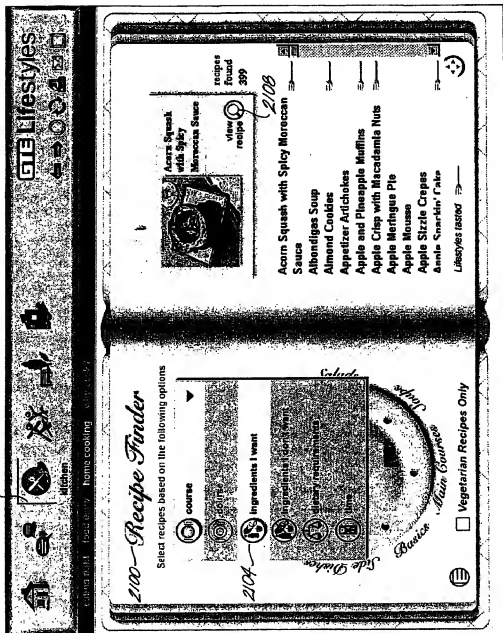
3032



SUBSTITUTE SHEET (RULE26)

Fig. 33

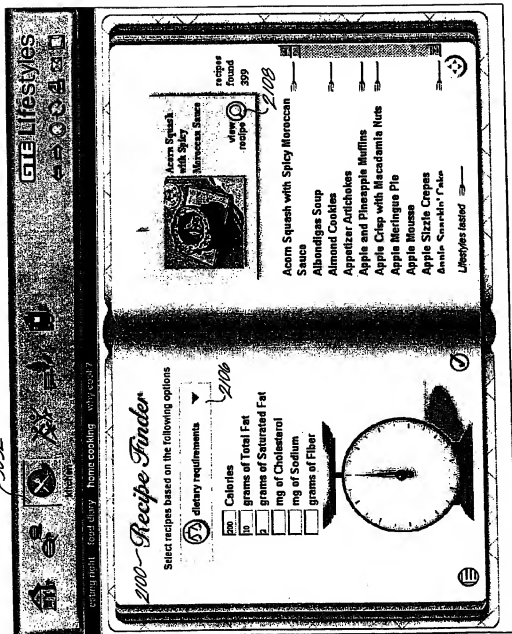
3032



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Fig. 3A

(3052)



SUBSTITUTE SHEET (RULE26)

Fig. 35

3032

GTE Lifelines

Home cooking

Chicken w/ Linguiue, Leeks, and Tomatoes

Ingredients: — 210

1/2 teaspoon basil, dried
1/4 teaspoon ground black pepper
1 cup low sodium chicken broth
4-ounce chicken breast halves, skinned and boned
1/4 teaspoon paprika
1/4 teaspoon ground red pepper
3 cloves garlic, minced
1/8 teaspoon cumin, ground
3 cups leeks, sliced

4 ounces linguine, dry
2 teaspoons soft margarine
nonstick cooking spray
1/4 teaspoon paprika
1/4 teaspoon ground red pepper
1/8 teaspoon salt
1/4 teaspoon oil
3 cups fresh tomatoes, diced

Nutritional — 210

Calories: 320.77
Total Fat: 4.66 gm
Saturated Fat: 1.06 gm
Cholesterol: 66.84 mg
Sodium: 376.16 mg
Fiber: 3.56 gm

Cooking Time:

Preparation: 30 min
Cooking: 30 min
Total: 60 min

Cooking Instructions: — 212

Instructions: Place each chicken piece between 2 sheets of heavy-duty plastic wrap, and flatten to 1/4 inch thickness, using a meat mallet or rolling pin. Combine 1/4 teaspoon of salt, garlic powder, paprika, red pepper, black pepper, and cumin; sprinkle over both sides

Servings: 4

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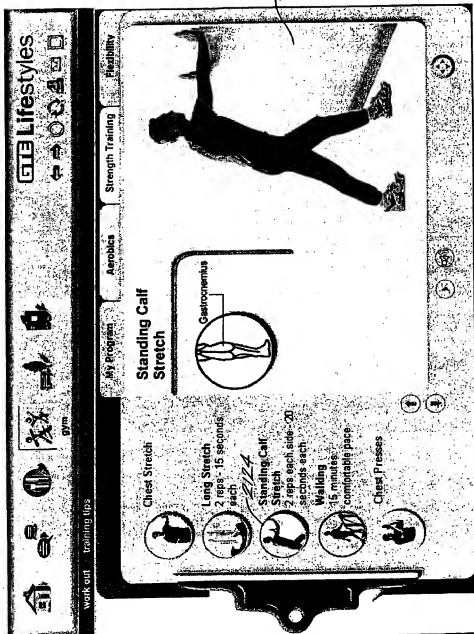
Fig. 36

3024



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Fig. 3B



SUBSTITUTE SHEET (RULE26)

Fig. 39

LifeStyles

→ → → → →

Your LifeStyles Exercise Program

work out training tips

2130

2132

2134

2136

2138

2140

2142

Search

Flexibility

Before You Begin

Your LifeStyles Exercise Program

Aerobic Exercise

Strength Exercise

Flexibility Exercise

The THREE Basic Exercise Components

There are **THREE** basic components to a well-rounded exercise program.

- **Aerobic Fitness**
Your body's ability to utilize oxygen and produce energy on a daily basis.
- **Muscular Strength**
The overall fitness of the muscles—the ability both to exert effort (strength) and to maintain it (endurance).
- **Flexibility**
The ability of your body to bend and move at ease through a full range of motion.

Your LifeStyles Fitness Program combines all three of these components into a personalized exercise routine.

Aerobic Fitness + Muscular Strength + Flexibility = a change in overall Body Composition.


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Fig. 40



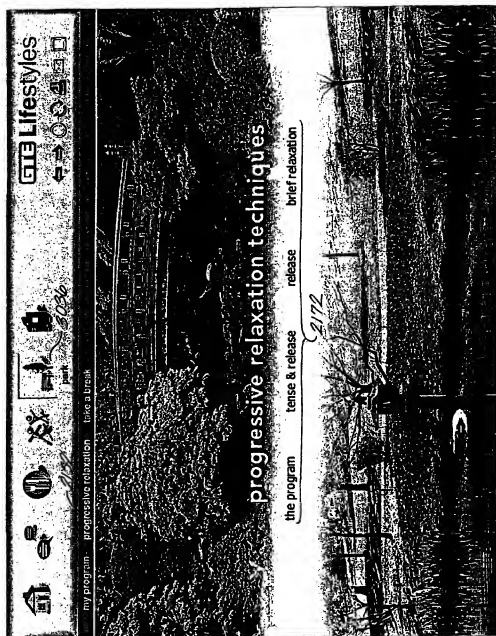
SUBSTITUTE SHEET (RULE26)

Fig. 41

| | |
|--|---|
|  <p>my program : progressive relaxation take a break</p> | <p>GTE Lifestyles</p> <p>→ ○ ○ ○ ○ ○</p> |
| <p>2. SECOND EXCURSION: <i>Hourglass Rutte</i></p> | |
| <p>Self-Assessment Quiz: How Do You Deal with Stress?</p> <p>We all have different ways of coping with the day-to-day demands that cause us stress.</p> <p>Some of our ways of coping are <i>adaptive</i>, which is to say they actually help reduce stress.</p> <p>Other reactions are <i>maladaptive</i>, which is to say they can even increase stress. Sometimes maladaptive reactions may reduce stress in the short run but increase in the long run.</p> <p>Check all of the following that apply to you.</p> <p><input type="checkbox"/> 1. I tune out demands</p> <p><input type="checkbox"/> 2. I take a drink at night to unwind.</p> <p><input type="checkbox"/> 3. When I am faced with a difficult problem I try to break it down into smaller, more manageable bits.</p> <p><input type="checkbox"/> 4. I take a deep breath and let it out slowly when I feel particularly tense.</p> <p><input type="checkbox"/> 5. When I have to get something done I will skip lunch.</p> | |

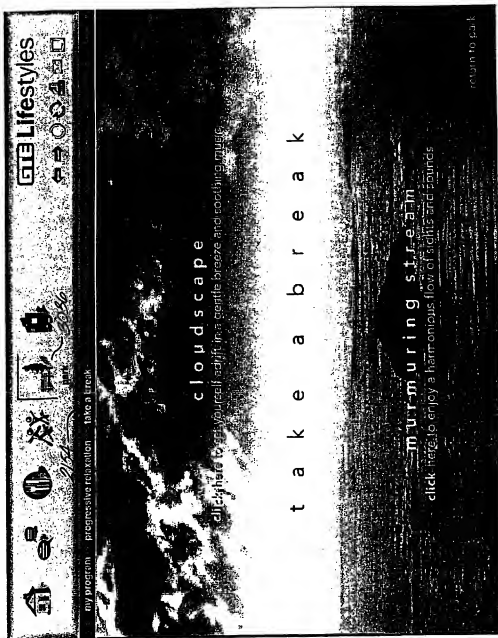
SUBSTITUTE SHEET (RULE26)

Fig. 42



SUBSTITUTE SHEET (RULE26)

Fig. 43



SUBSTITUTE SHEET (RULE26)

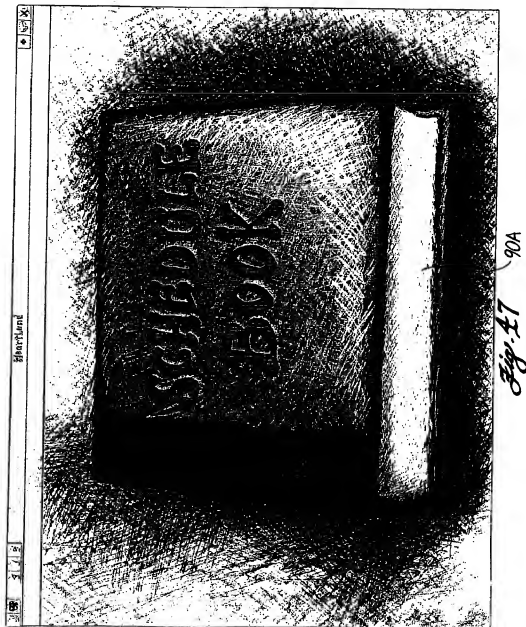
[illegible]



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SUBSTITUTE SHEET (RULE26)



SUBSTITUTE SHEET (RULE26)

100

106

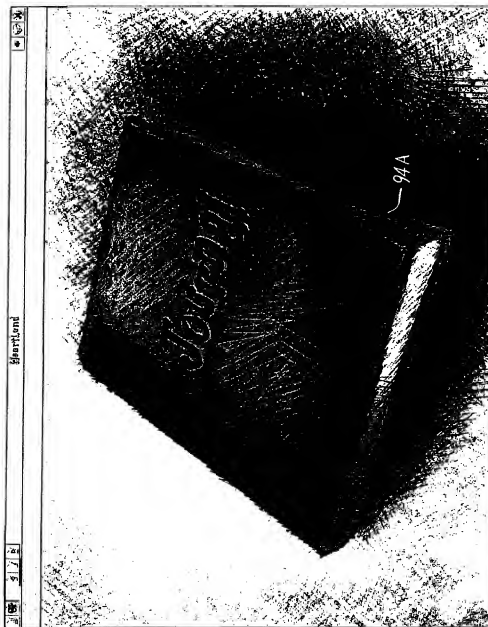
108

| TIME | GROUP | # | CITY | ACTIVITY |
|-----------|-----------------|----|-------------|----------|
| 7:30 A.M. | Movies | 4 | LA, CA | Low |
| 7:30 A.M. | Dog Lovers | 15 | LA, CA | High |
| 7:30 A.M. | Fur-factionist | 18 | NYC, NY | High |
| 7:45 A.M. | Just for Laughs | 10 | NYC, NY | Med |
| 8:00 A.M. | Spartans | 12 | Chicago, IL | Med. |
| 7:30 A.M. | Travelers | 5 | LA, CA | Low |
| 7:45 A.M. | Cool Set | 8 | LA, CA | Low |
| 7:45 A.M. | Country Bunkins | 12 | Ithaca, NY | Med. |
| 7:30 A.M. | City Slickers | 8 | NYC, NY | Low |
| 7:45 A.M. | K9's | 18 | NYC, NY | High |
| 8:00 A.M. | Water Babies | 7 | Dallas, TX | Med. |

104

Fig. 1B

SUBSTITUTE SHEET (RULE26)

*Fig. 19*

SUBSTITUTE SHEET (RULE26)

| Hartland | |
|---|--|
| <p>EMOTICONS ~ 100</p> <p> <input type="checkbox"/> Happy <input type="checkbox"/> Comprehending <input type="checkbox"/> more confident <input type="checkbox"/> confident <input type="checkbox"/> committed <input checked="" type="checkbox"/> Worried <input type="checkbox"/> anxious <input type="checkbox"/> scared <input type="checkbox"/> Aware <input type="checkbox"/> Growing <input type="checkbox"/> Failing <input type="checkbox"/> Drifting <input type="checkbox"/> Angry <input type="checkbox"/> Sad <input type="checkbox"/> Depressed </p> | |
| <p>VITAL SIGNS ~ 102</p> <p> Heart Rate 82 Blood Pressure 160/98 Cholesterol 290 Diet <input type="checkbox"/> Y <input type="checkbox"/> N </p> | |
| <p>EXERCISE ~ 104</p> <p> Walking <input type="checkbox"/> Y <input type="checkbox"/> N Stretching <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Stress Mgmt. <input type="checkbox"/> Y <input type="checkbox"/> N </p> | |

Fig. 50

SUBSTITUTE SHEET (RULE 26)

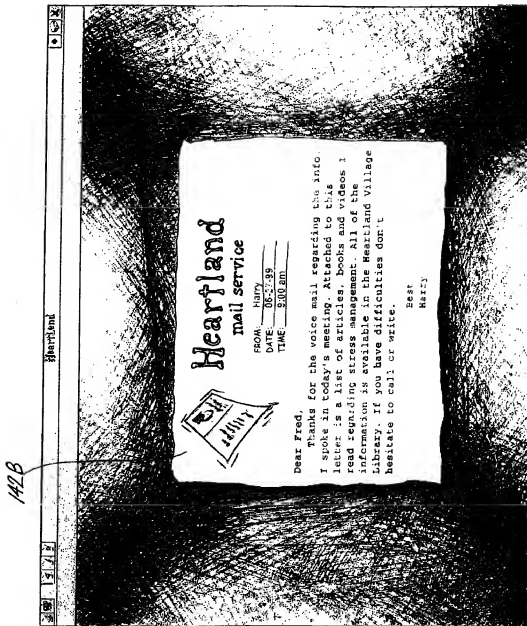


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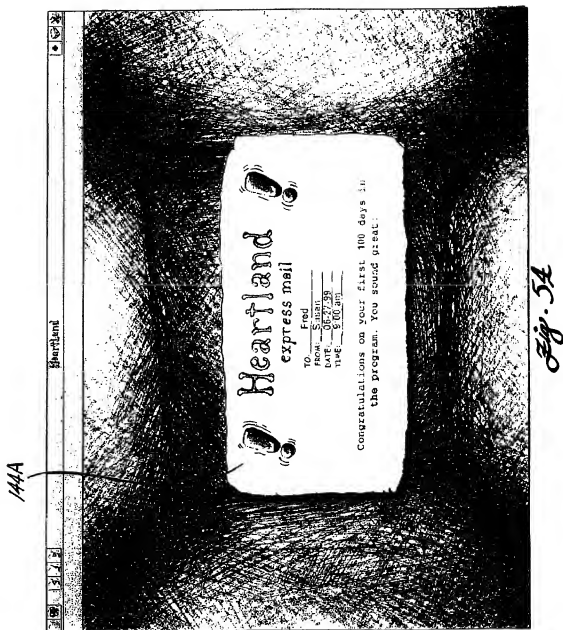
SUBSTITUTE SHEET (RULE26)

59/105

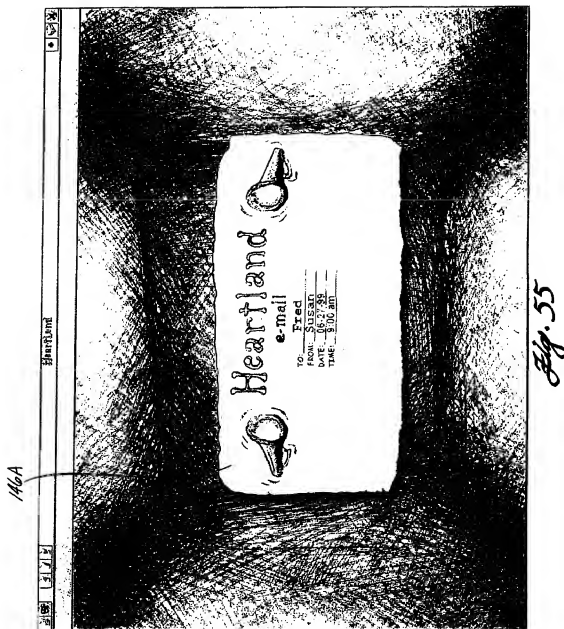


SUBSTITUTE SHEET (RULE26)

60/105

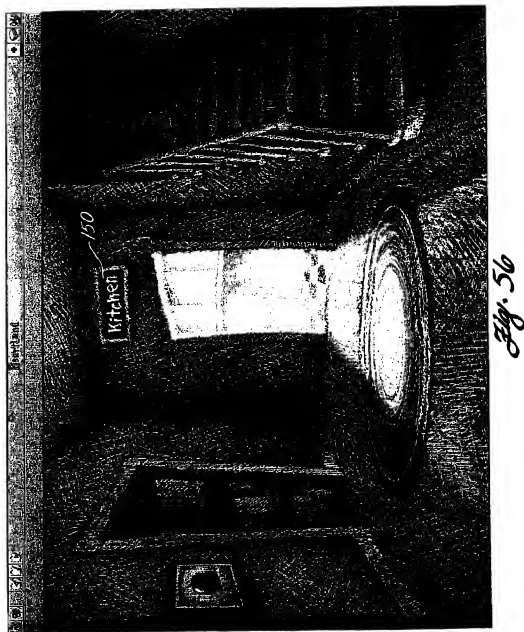


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SUBSTITUTE SHEET (RULE26)

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SUBSTITUTE SHEET (RULE26)

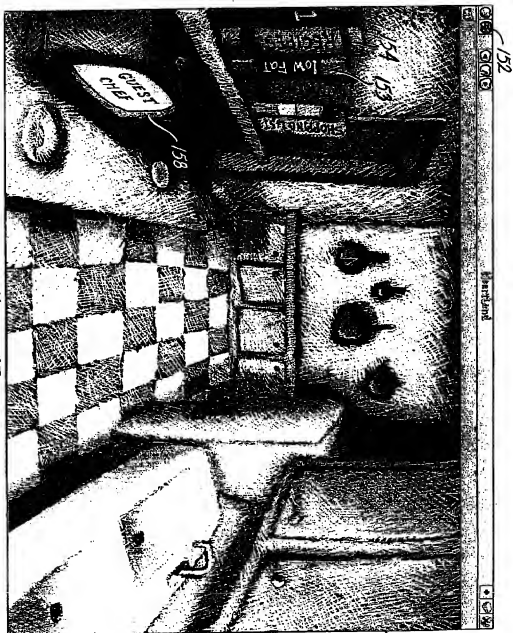
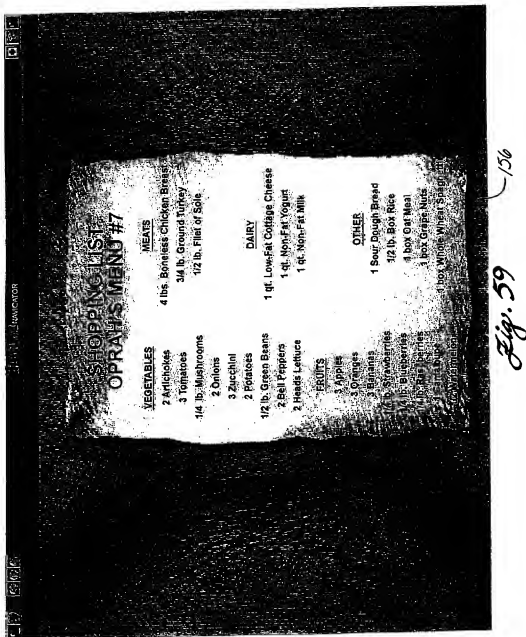


Fig. 57

SUBSTITUTE SHEET (RULE26)

65/105



SUBSTITUTE SHEET (RULE26)

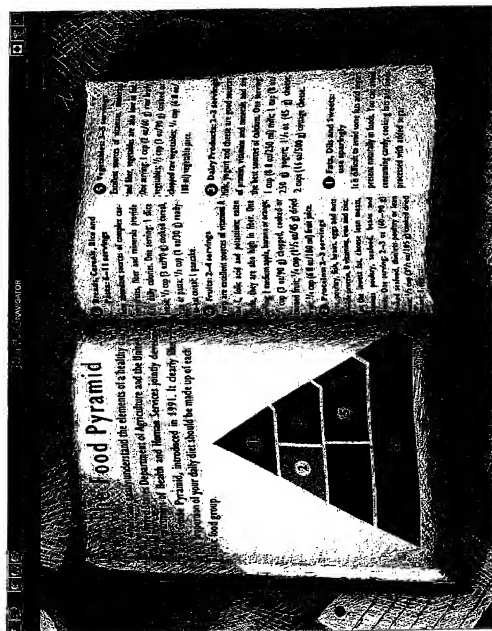


Fig. 60

SUBSTITUTE SHEET (RULE26)

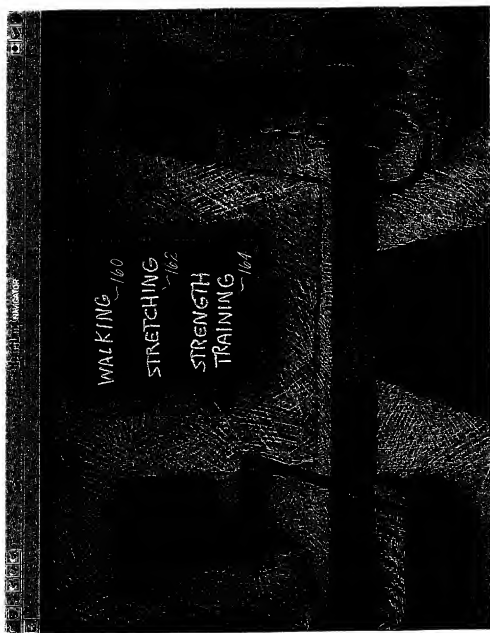
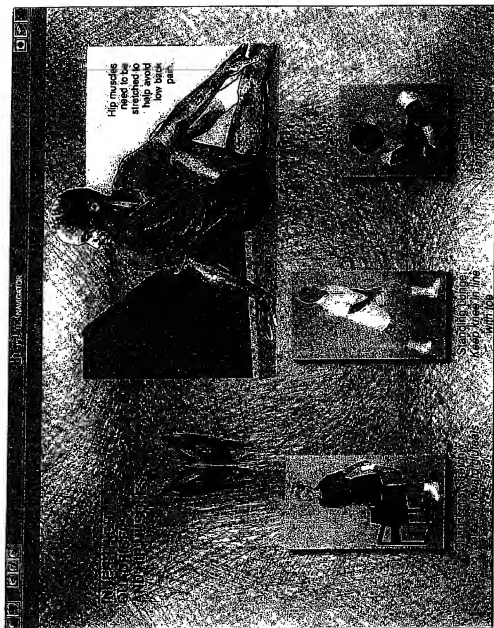


Fig. 61

SUBSTITUTE SHEET (RULE26)

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*Fig. 62*

SUBSTITUTE SHEET (RULE26)

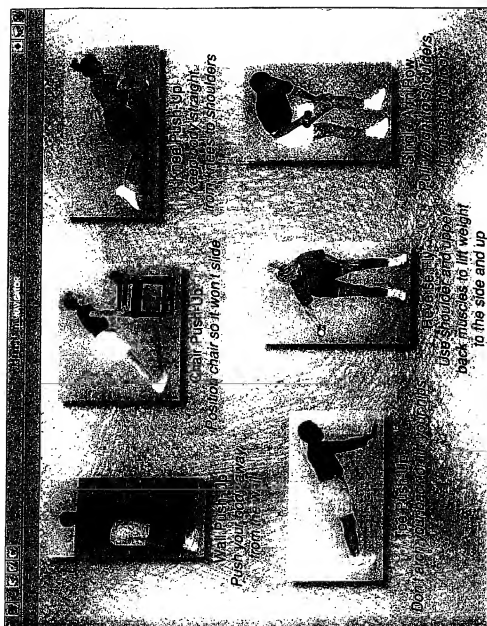


Fig. 63

SUBSTITUTE SHEET (RULE26)

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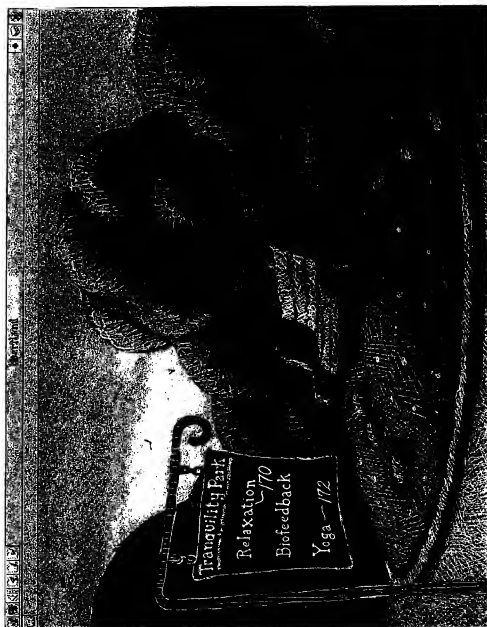


Fig. 6A

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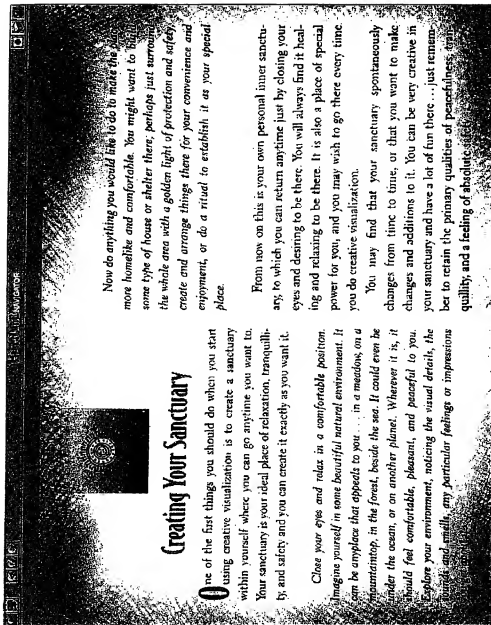
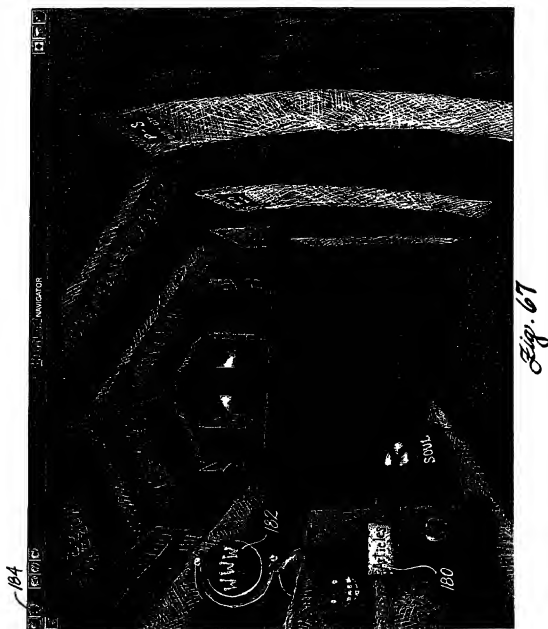


Fig. 65



SUBSTITUTE SHEET (RULE26)

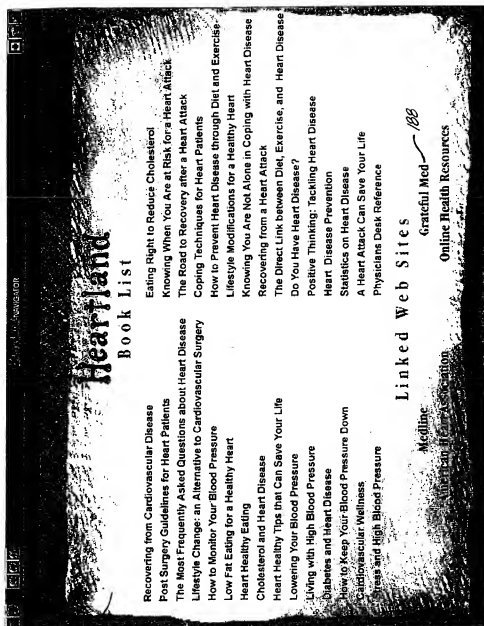


Fig. 68

SUBSTITUTE SHEET (RULE 26)

Internet Explorer

Today's Question: Which blood tests are indicated for assessment of the impotent patient? (Answer)

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 Register Here
 Member Sign In

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Women's Health
 Understanding, Recognizing, and Treating Rett Syndrome
 Sarojini S. Boddin, MD, Oregon Health Sciences University in Portland
 Also: Neoplasia & Smoking, PTSD & Infertility, Gyn Case Challenge, Genetic Link.

Primary
 Recognizing and Treating Depression in the Elderly
 Mark D. Miller, MD, University of Pittsburgh Medical Center

Fig. 69

SUBSTITUTE SHEET (RULE 26)

DETERMINING YOUR TARGET HEART RATE ZONE

1. Take your pulse on your neck or wrist.
2. Subtract your age from 220.

| | |
|--------------------|------------|
| Maximum heart rate | 220 |
| - 40 Sample Age | <u>180</u> |
3. Multiply maximum heart rate by .55

| | |
|------------------------|-----------|
| Lower heart rate limit | 180 |
| x .55 | <u>99</u> |
4. Multiply maximum heart rate by .85

| | |
|------------------------|------------|
| Upper heart rate limit | 180 |
| x .85 | <u>153</u> |
5. Your target heart rate zone is defined by lower and upper heart rate limits.

TO SEE IF YOU ARE IN YOUR TARGET HEART RATE ZONE

Take your pulse for :10 seconds
and multiply that number by six.

This should be in your
Target Heart Rate Zone.

Fig. 70

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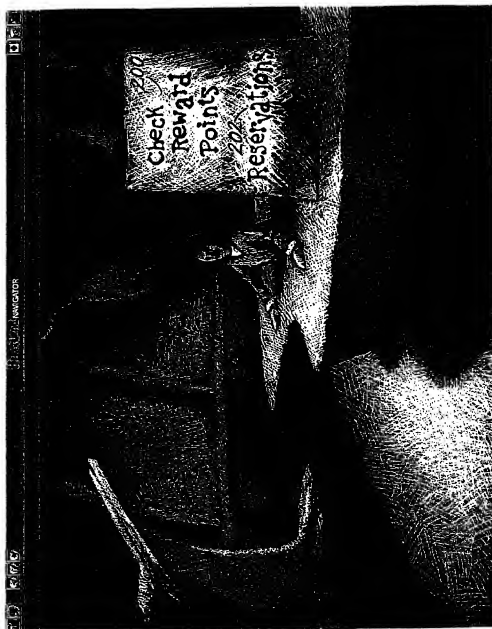
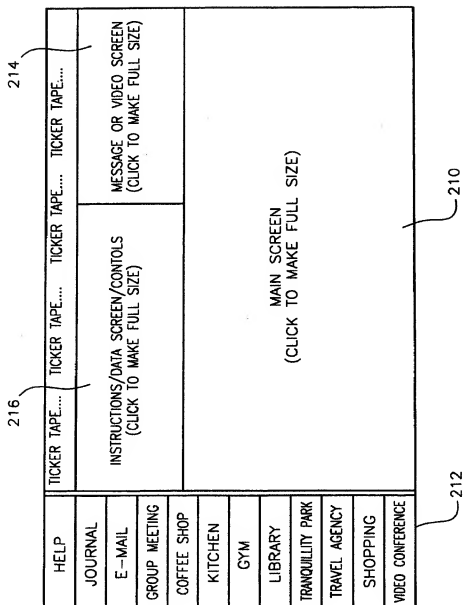


Fig. 7L

SUBSTITUTE SHEET (RULE26)

FIG. 72



SUBSTITUTE SHEET (RULE26)

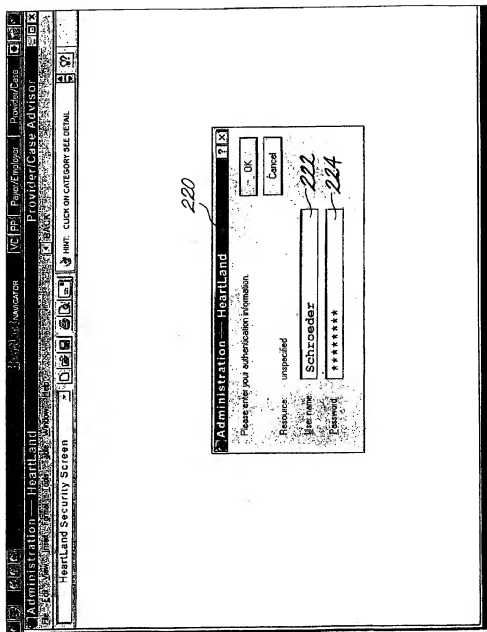


Fig. 73

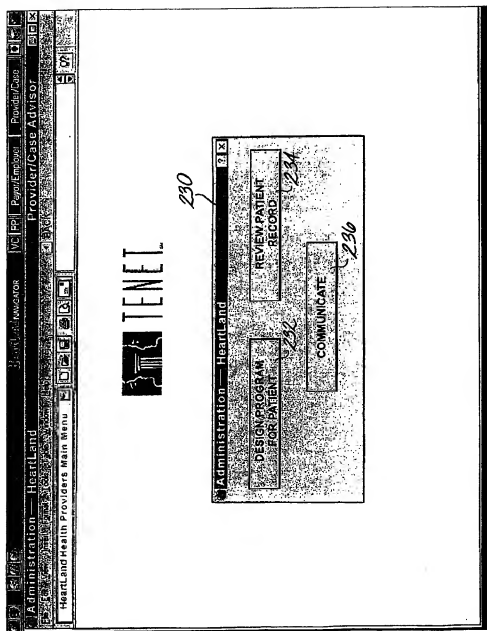


Fig. 7A

Fig. 75

SUBSTITUTE SHEET (RULE26)

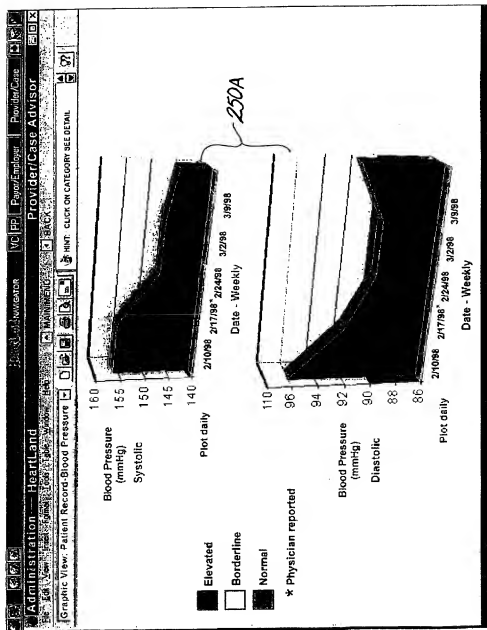


Fig. 76

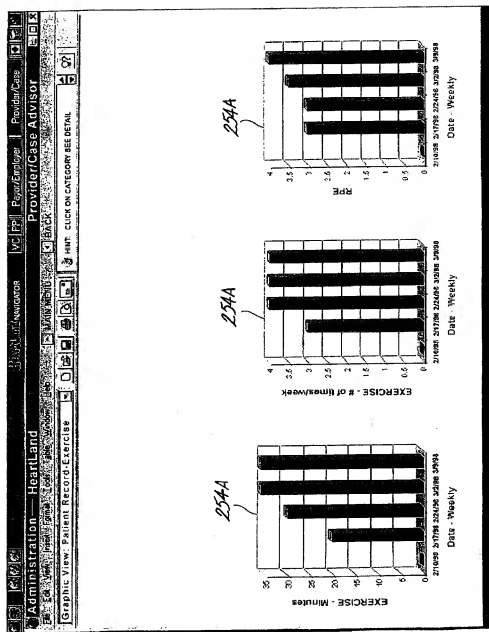


Fig. 77

SUBSTITUTE SHEET (RULE26)

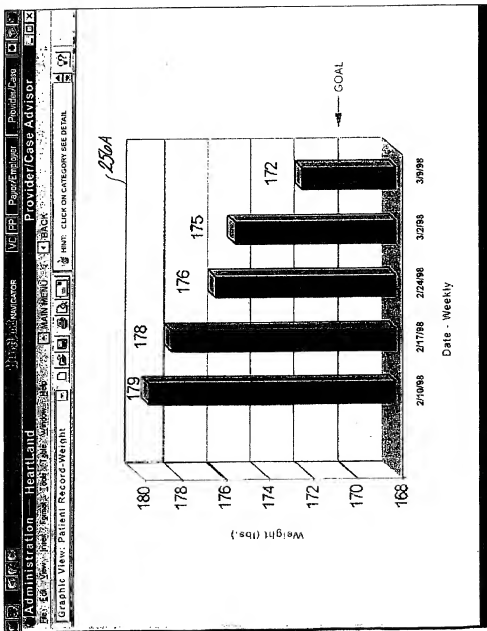


Fig. 7B

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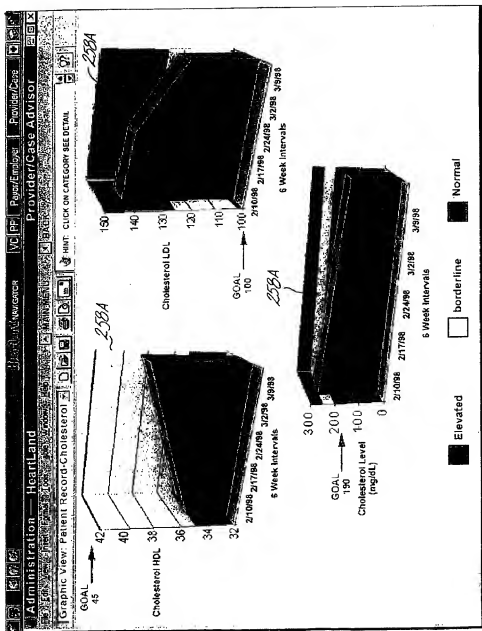


Fig. 79

SUBSTITUTE SHEET (RULE26)

Fig. 81

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Administration — HeartLand

HeartLand Case Advisory System

HeartLand Case Advisory System

Provider/Case Advisor

HeartLand Communications Center

Send Messages To: Fred Smith

☒ Subscriber ☒ Auto File

☐ Responsible Physician

☐ Other

Select Type of Message

☒ Audio E-Mail ☒ Resp. Physician

☐ Text E-Mail ☐ Subscriber

☐ FAX ☐ Other

BCC: ☐ Other

Date: 3/10/98

1. INCREASE EXERCISE TO: 45 minutes

2. INCREASE RPE TO: Level 5

3. INDICATE TO PHYSICIAN BLOOD PRESSURE IN YELLOW ZONE AT: 146/92

4. CHOOSE REWARD FROM: Village Mall

For 30 Smoke Free Days

5. Good support group attendance

6. OTHER: Diet, Exercise, Stress, Support

Best Wishes,
Susan, your case advisor

Record Message here:

Type Text Message here:

340

344

Fig. 82

SUBSTITUTE SHEET (RULE26)

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*Fig. 83*

SUBSTITUTE SHEET (RULE26)

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Fig. 8A

Fig. 8A

Administration Administrator

Health Advisor Content Health Advisor

5000 5002

Admin ID First Name Last Name Password

| | | | |
|----------|----------|---------|--------|
| Sarah | Sarah | Lin | Sarah |
| Sarahlin | Sarahlin | Lin | Sarah |
| Nina | Nina | Lin | Nina |
| Praver | Robert | Praver | Heide |
| Praver | Praver | Praver | Praver |
| Robert | Robert | Robert | Robert |
| Admin1 | Admin1 | Admin | Admin |
| Admin2 | Admin2 | Test | Admin |
| Health1 | Health1 | Kritzer | Alan |
| Health2 | Health2 | Praver | Heide |
| Content1 | Content1 | Kritzer | Alan |
| Content2 | Content2 | Praver | Heide |
| Atilla | Atilla | Praver | Atilla |
| Ng | Ng | Ng | Ng |
| Alex | Alex | Alex | Alex |
| 189 | 189 | Wenzel | Susan |

Health Advisor Content Administrator Content Health Advisor

5000 5002

Admin ID First Name Last Name Password

Search Add

189

SUBSTITUTE SHEET (RULE26)

Fig. 85

| Administration | | Content | | Health Advisor | | Data Analysis | | | | |
|---------------------------------|-----------|---|---------------|---------------------------------|-------------|------------------|--------|-------------------------|-------|---------------|
| Exercise | | Library | | Nutrition | | Testing | | | | |
| Add Nutrition Program Levels | | | | | | | | | | |
| Modify Nutrition Program Levels | | | | | | | | | | |
| Level 1 | Total Fat | 20% $\frac{15}{15}$ of calories or less | Saturated Fat | 10% $\frac{15}{15}$ of calories | Cholesterol | Less than 300 mg | Sodium | 2400 mg $\frac{15}{15}$ | Fiber | 20 - 35 grams |
| Level 2 | Total Fat | 30% $\frac{15}{15}$ of calories or less | Saturated Fat | 7% $\frac{15}{15}$ of calories | Cholesterol | Less than 200 mg | Sodium | 2400 mg $\frac{15}{15}$ | Fiber | 20 - 35 grams |
| Level 3 | Total Fat | 25% $\frac{15}{15}$ of calories or less | Saturated Fat | 6% $\frac{15}{15}$ of calories | Cholesterol | Less than 150 mg | Sodium | 2400 mg $\frac{15}{15}$ | Fiber | 20 - 35 grams |
| Level 4 | Total Fat | 20% $\frac{15}{15}$ of calories or less | Saturated Fat | 4% $\frac{15}{15}$ of calories | Cholesterol | Less than 100 mg | Sodium | 2000 mg $\frac{15}{15}$ | Fiber | 20 - 35 grams |
| Level 5 | Total Fat | 10% $\frac{15}{15}$ of calories or less | Saturated Fat | 4% $\frac{15}{15}$ of calories | Cholesterol | Less than 100 mg | Sodium | 2000 mg $\frac{15}{15}$ | Fiber | 20 - 35 grams |
| Level 6 | Total Fat | 10% $\frac{15}{15}$ of calories or less | Saturated Fat | 4% $\frac{15}{15}$ of calories | Cholesterol | Less than 100 mg | Sodium | 2400 mg $\frac{15}{15}$ | Fiber | 20 - 35 grams |

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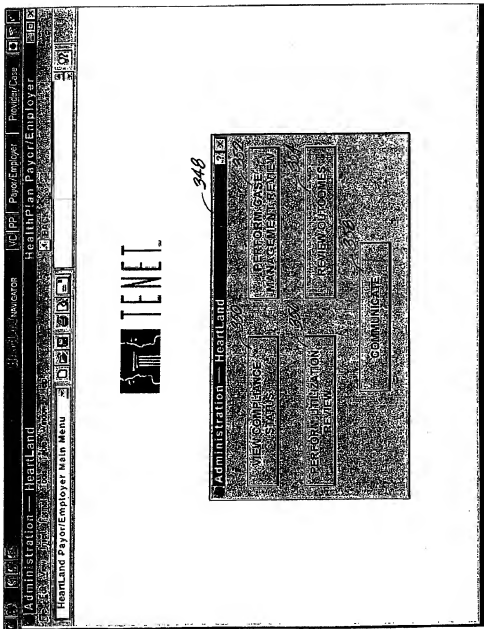
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Fig. 86

| Administration | | Consent | | Health Advisor | | Nutrition | | Mixing | | Dip Analysis | |
|---|--|-------------------------------------|--|-------------------------------------|--|------------------------------|--|--|--|--------------|--|
| <p>Edit Exercise:</p> <p>Add Exercise Modify Exercise Set Up Exercise Frequency Weight Table Reset Intro Video</p> | | | | | | | | | | | |
| Name: | | | | Arm Circles | | Type: | | <input type="radio"/> Aerobics <input checked="" type="radio"/> Strength <input type="radio"/> Flexibility | | | |
| Name: | | | | Arm Circles | | Type: | | | | | |
| Type: | | | | Strength | | File Name: | | str_012 | | | |
| Include Image: | | | | <input checked="" type="checkbox"/> | | Exercise Order in the group: | | 7 | | | |
| Exercise Group: | | | | Arms | | Notes | | | | | |
| Level | | Selected | | Constraint | | Notes | | Special instruction: check the box if weight applied | | | |
| Level 1 | | <input checked="" type="checkbox"/> | | 10 repetition | | Each direction | | <input type="checkbox"/> | | | |
| Level 2 | | <input type="checkbox"/> | | repetition | | | | <input type="checkbox"/> | | | |
| Level 3 | | <input type="checkbox"/> | | repetition | | | | <input type="checkbox"/> | | | |
| <p>Check here if you want to delete this exercise. <input type="checkbox"/></p> | | | | | | | | | | | |

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SUBSTITUTE SHEET (RULE26)

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Heartland Comparative Cost Review

Region: **Ontario** Date: **July 31, 1998**

Time Period: **Last 12 months**

HEALTH PLAN PAYER/EMPLOYER: **Heartland** PROVIDER/CLINIC: **Heartland**

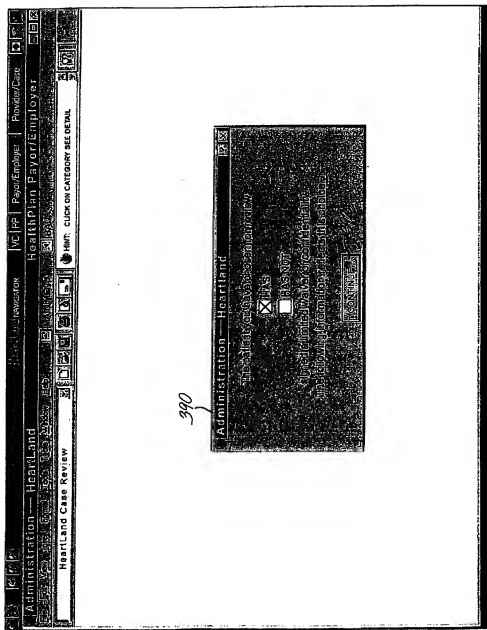
HINT: CLICK ON CATEGORY BEE DETAIL

| Category | Description | Number on Program | Heartland Group Medical Costs | Heartland Program Costs | TOTAL HEARTLAND COSTS | Control Group Medical Costs | Heartland Savings |
|---------------|--|-------------------|-------------------------------|-------------------------|-----------------------|-----------------------------|-------------------|
| Category I | Current-Year MI Survivors | 106 | 253,385 | 191,850 | 435,015 | 589,221 | 154,206 |
| Category II | Current-Year Bypass & Angioplasty | 78 | 146,678 | 122,360 | 263,038 | 327,153 | 64,117 |
| Category III | Current-Year Diagnosed CAD, Surgery Rec | 77 | 246,702 | 133,210 | 373,912 | 559,772 | 185,860 |
| Category IV | All Diagnosed Angina | 708 | 1,139,172 | 1,047,840 | 2,187,012 | 2,648,237 | 462,225 |
| Category V | Prior-Years MI & Post-Surgical - High Risk | 880 | 1,840,840 | 1,006,400 | 2,647,240 | 3,915,907 | 1,188,887 |
| Category VI | Prior-Years MI & Post-Surgical - Low Risk | 227 | 426,177 | 197,490 | 617,667 | 977,168 | 359,488 |
| Category VII | (2 or more factors) | 3,191 | 2,003,948 | 717,975 | 2,721,923 | 4,580,344 | 1,938,421 |
| Category VIII | Wellness Program | 7,920 | 2,304,720 | - | 2,304,720 | 5,369,814 | 3,055,094 |
| TOTALS | | 12,984 | 8,143,800 | 3,406,925 | 11,550,725 | 18,938,605 | 7,388,080 |

Fig. B9

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SUBSTITUTE SHEET (RULE26)

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400

Administration — Heartland
Heartland Case Management Review 21 01 98 Insurance HealthPlan an Payor/Employer Provider/Case

Chosen case for review: Fred Smith
Heartland I.D. #: 23-642
Subscriber since: 1/20/98

Date: 3/10/98
Social Security #: 213-48-3947
Total weeks on Heartland program: 7

HNKT: CLICK ON CATEGORY SEE DETAIL

Fred Smith: 48 years, anterior M.I. 1/6/98 Risk Factors: Hypertension, smoker, lack of exercise, elevated LDL cholesterol

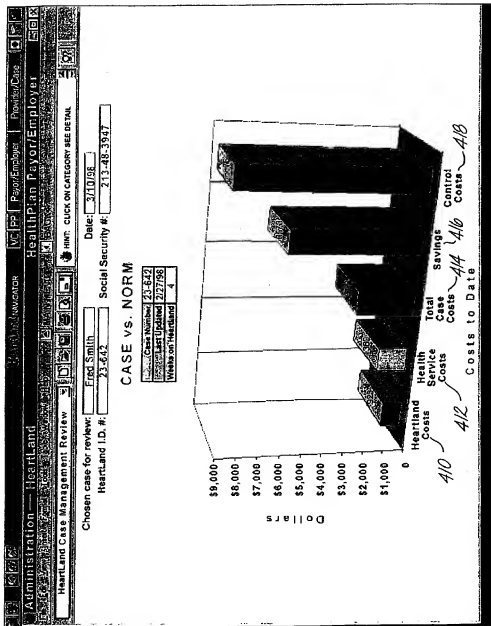
| BASELINE (1/20/98) | 2/10/98 | 2/17/98 | 2/24/98 | 3/2/98 | 3/9/98 | G.O.A.L.S. |
|---|-----------|-----------|-----------|-----------|-----------|-----------------------------------|
| B.P. (160/95 mmHg) | 160/95 | 160/92 | 140/90 | 140/90 | 140/92 | B.P. < 140/90 mmHg |
| Cigarettes/day (20) | 16 | 10 | 0 | 0 | 0 | Complete Smoking Cessation |
| Physical Activity minutes/week (PE) | 0/0/0 | 20/2/3 | 30/4/3 | 35/4/3.5 | 35/4/4 | 45 mins walking / 7 days week / 6 |
| Reading H.R. 68 | 79 | 68 | 68 | 47 | 47 | |
| Weight baseline (180 lbs.) | 179 lbs. | 178 lbs. | 176 lbs. | 172 lbs. | 172 lbs. | WEIGHT: 170 BMI: 25.00 |
| Stress level (8) (weekly average) | 7.0 | 7.2 | 6.9 | 6.1 | 6.9 | 3.5 (10-40X) |
| Aspirin 325 mg/day (mixed aspirin) | 1 | 2 | 1 | 1 | 1 | |
| Hydrochlorothiazide 12.5 mg daily (mixed aspirin) | 1 | 1 | 0 | 0 | 0 | Compliant use of Medications |
| Lowestatin 20 mg/day (mixed aspirin) | 1 | 1 | 0 | 0 | 0 | |
| Calories 3077 Cal | 3,400 | 3,330 | 3,330 | 3,300 | 3,300 | 2,800 cal/day |
| % Fat Calories 30 | 48% | 48% | 49% | 30% | 30% | 15% fat calories |
| Cholesterol - LDL | 132 mg/dl | 128 mg/dl | 140 mg/dl | 160 mg/dl | 160 mg/dl | 100 mg/dl |
| Cholesterol - HDL | 35 mg/dl | 37 mg/dl | 38 mg/dl | 38 mg/dl | 38 mg/dl | 45 mg/dl |
| Cholesterol | 245 | 225 | 210 | 210 | 210 | 190 |

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Fig. 9L

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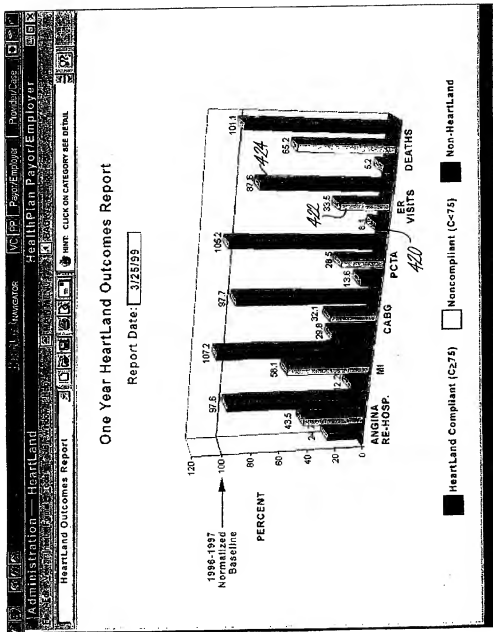
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Fig. 93



SUBSTITUTE SHEET (RULE26)

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Fig. 9A

Administration — HeartLand
 HealthPlan Payor/Employer
 HeartLand Utilization Review
 BACK REVIEW MORE GROUPS/FACILITIES
 HINT: CLICK ON CATEGORY SEE DETAIL

Utilization Review

Target: 23%

| Group or Facility | ICD-9 | Specialty | ATD CAG Cases | Percent referred to HeartLand vs. FROM |
|------------------------|-------|-----------|---------------------|---|
| Central Valley IPA | 8224 | Primary | 28 | 22.80% |
| Baywatch Phys & Sur | 9732 | Cardio | 127 | 16.70% |
| Fulton Cty. Cardiology | 6376 | Cardio | 86 | 24.60% |
| Care Fido of Clovis | 8476 | Primary | 52 | 23.60% |
| Riverside Primary Care | 8746 | Primary | 77 | 18.80% |

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Administration HeartLand HeartLand Case
HeartLand Case Advisory System

HeartLand Communications Center

Send Messages to

☒ Training ☐ Subscribers
☒ Responsible Publications ☐ Other

Select Type of Message

☐ Audio with ☐ Text with ☐ Text only

Type text message here

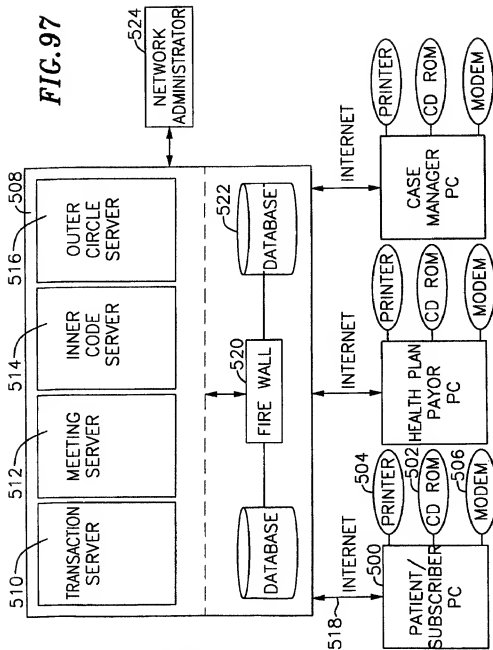
Record Message here

SEND MESSAGE

Fig. 96

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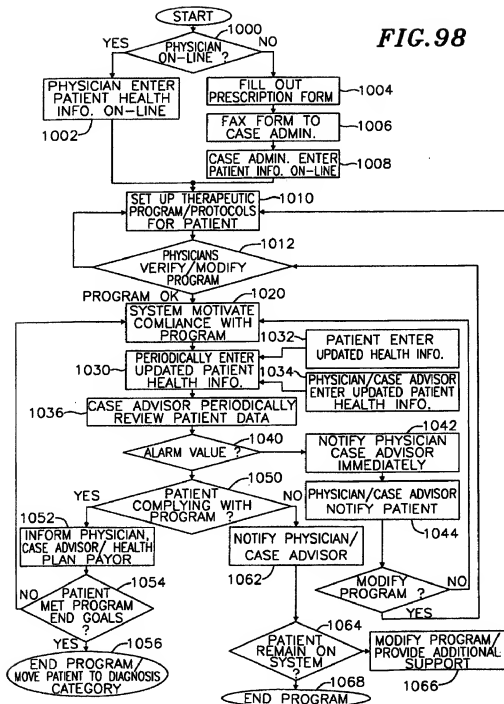
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FIG. 98



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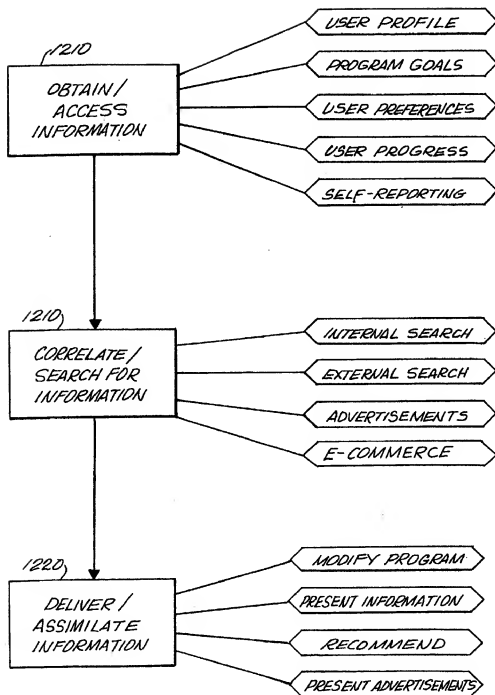


Fig. 99

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